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ARCHIVES - Profile of the Canadian Multimedia Industry - Executive Summary

Multimedia is one of the new knowledge-based industries paving the way for the creation of several thousand jobs in Canada and for Canadian trade development in a globalized economy. It will transform all of the economic and social activity sectors, specifically education and training, entertainment, trade and communications. A multimedia product is defined according to three criteria which, in our opinion, are: a potentially interactive product; a product that integrates content (sound, image, text or video), and; a digitally-supported product, whether fixed or mobile. The most popular digital support for tomorrow's markets is the Internet.

The Internet concept is strictly multimedia since it involves a series of standards that enable the coding, transmission and retrieval, for consultation, of not only text and image but also sound and video. Once high-speed access has become more widely available, the electronic commerce market in mul-timedia products is bound to explode.

Electronic commerce over the Internet constitutes one of the major axes of this new economy emerging before our eyes. According to many analysts of the economic scene, it constitutes a technological upheaval that is as fundamental as were the appearances of rail transportation and the electric motor.

At this point, small businesses represent a significant, if not dominant force, in the multimedia sector. As well, numerous businesses in the traditional media area, such as the press, radio, television, advertising and public rela-tions, employ an in-house service that specializes in New Media in order to adapt to new technological trends. There is currently no generic business model for New Media. Whereas the demand for multimedia services in re-sponse to specific business needs is growing strongly, mass market demand is still not growing as it had been hoped.

In terms of revenues, multimedia sector sales appear to average between $80,000 and $100,000 per employee. A combination of the studies provid-ing estimates of the industry's national revenue suggests revenues in the order of $2 billion. A recent survey by Multimediator Strategy Group esti-mated the industry's national revenue at $3.5 billion. The sector is under-going rapid expansion, at the rate of 20% per year according to the esti-mates (some studies assess the growth rate at 30%). In conclusion, there are approximately 2,300 companies operating in the Canadian multimedia industry.

According to multimedia industry leaders, businesses are still generally under-funded and they do not have the necessary means to ensure their development. Although they now have access to government support pro-grams, these sources of funding remain limited and oriented to product manufacturing rather than business development. Venture capital is very scarce since managers in this area remain highly cautious.

The Canadian multimedia industry is experiencing significant growth, which means that the pressure is on to develop the human resources and skills that are needed to enable companies to meet the challenges of marketing and globalization. After a period of phenomenal growth, the Canadian mul-timedia industry is now going through a period of consolidation, which is expected to continue for the next few years. Fewer companies are appear-ing and the existing ones have a tendency to merge in order to form real SMEs or much larger entities.

Canada has a qualified and accessible labour force pool throughout its ter-ritory. At 4.8%, this country has the highest proportion of public expendi-tures dedicated to post-secondary education, compared with an OECD aver-age of 2.7%. At the higher levels, more than one million young Canadians attend some 200 technical institutions and community colleges. Finally, there are around half a million students registered in the hundred or so universities across Canada. Canadian multimedia training institutions are true incubators of the digital economy and they can be found in right across the country.

Canada's multimedia industry can be found, to various degrees, in all parts of the territory. Whereas Quebec, Ontario and British Columbia are homes to the three main multimedia clusters in Canada, which are Montréal, To-ronto and Vancouver, the Maritime and Prairie provinces are emerging and tending to develop in different niches.

Overall, the Canadian multimedia industry has a presence in all of the emerging multimedia markets. Interactive games (PC, Internet and con-soles), training (on CD-ROM or online) and corporate services are but a few of the segments in which Canadian companies continue to distinguish them-selves and to hold top place. It goes without saying that the markets re-lated to multimedia products and services are undergoing phenomenal growth. In this, they are following the global trend towards automation and networking. Given the relatively thin domestic market in Canada, Canadian

companies are exploring foreign markets in the search for outlets for their products and services. The main foreign multimedia markets are the United States, Europe and the Asian market.

The Canadian multimedia industry is facing various issues and trends. The distribution and marketing of its products and services, the strategic alli-ances and the convergence of the two main media at this start of the new millennium, the Internet and television, should be mentioned. The Canadian industry, which is diversified and enjoying privileged access to the most important multimedia market in the world, is holding all the cards it needs to position itself at the forefront of the digital revolution, which is knocking at our doors.

Canada

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ARCHIVES - Profile of the Canadian Multimedia Industry - Foreword

This study gives a profile of the Canadian multimedia industry. A summary of the key studies, surveys and investigations into the multimedia phenomenon and its economic implications for Canada are used to draw the broad outlines of this still emerging industry. This study does not claim to generate new knowledge about this industry sector, it merely brings together the information that is currently available in Canada about the multimedia industry in the most coherent manner possible.

When compiling various studies and surveys, which often use different definitions for a business and a multimedia product, there is always a risk of statistical distortion. Given that we are aware of this, we indicate the statistical sources throughout the study, and whenever their reliability is debatable, we indicate this to the reader. When there are no qualifiers for the figures provided, it means that the margin of error is deemed acceptable.

This study could not have been carried out without the co-operation of th e regional members of IMPAC. We extend our wholehearted thanks to them for their help. We also extend our thanks to Canadian Heritage, which provided us with data on the multimedia funding programs provided to entrepreneurs in all regions of Canada. The table on funding programs is appended to this report. We also extend our warmest thanks for the co-operation provided by Industry Canada and the valuable and unflagging collaboration received from Michel Bélanger, without whom this study could not have seen the light of day in its current form.

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ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 1: A Brief History and Definition of Multimedia

A Brief History of Multimedia

Multimedia is one of the new knowledge-based industries that have paved the way for the creation of thousands of jobs in Canada and for Canadian trade development on the world market.

Multimedia, which is related to the leading technologies segment, holds a key place in the knowledge-based economy, affecting numerous facets of business and private life. Multimedia is expected to change our lives completely. It will transform all of the economic and social activity sectors, specifically health care, education and training, entertainment, trade and communications.

Multimedia emerged from the conversion to digital of the whole range of information (text, voice, image and video). The conversion of information to digital created a common technological platform for the full range of information exchanges, which is to say binary language consisting of the 1 and 0 information bits.

Writing was the first to be converted to digital. Electronic data and electronic message transfers replaced the old styles of exchange through telegram, telex and TWX. Later on, the conversion to digital provided the opportunity to send telephone signals over the same infrastructure as electronic data and electronic messaging. The current stage in the integration of all information exchanges onto a single integrated platform is the conversion of images and video to digital.

In addition to the common platform, conversion to digital is changing the very nature of information exchanges. A document can be indefinitely modified, stored and re-sent while still retaining its original freshness. Such manipulation involves the concept of interactivity. This refers to the opportunity that the manipulator has to react to his/her originator and to interact with other recipients.

This two-fold characteristic of digital information universal platform and interactivity gave birth to the multimedia phenomenon in the 1980s. The ability to code and transmit all forms of information through a single language provided an opportunity to integrate what had previously been technologically divided into a single document. Furthermore, it became possible to consult this document at will, in whole or in part, at any time.

We started referring to multimedia documents in the 1980s with the optical videodisc. After 1985, videodiscs were soon replaced by CD-ROMs. Today, multimedia documents can be found on CD-ROMs, video game cartridges, DVDs, conversational terminals and, of course, on the Internet, despite the enormous obstacle faced by this vehicle the size of the bandwidth, which is still inadequate for acceptable transmission quality for a multimedia product. We will return to this later.

Since 1996, the introduction of the Digital Video Disc (DVD) has added a new multimedia support with previously unmatched power. Its capacity is around 8.5 gigabytes, compared with 650 megabytes for the CD-ROM. Nonetheless, it has made only marginal inroads into households so far.

Obstacles Related to the Absence of Clear Definitions

> "This is tomorrow's industry and unfortunately if we cannot make these people aware, these thinkers who are protecting our cultural industry, it's going to be a problem."
> Multimedia Industry, DJC 1996

One of the primary barriers to growth and investment in the sector is the industry's own perception. The parameters of what constitutes the multimedia industry are not clearly defined and this weakness presents a problem in terms of both individual business development and efforts to obtain funding.

The different types of individuals who make up the multimedia industry are contributing to the absence of a clear definition. There are two general categories of multimedia professionals: 1) technologically advanced, usually younger with a creative

orientation, and 2) individuals who have evolved with the industry itself, coming, for example, from the traditional media. These two groups often have disparate views and contribute to the lack of definition inherent in the industry.

According to the survey participants [DJC 96], despite the highly specific and technical nature of the industry, the technology itself has evolved to the point where any guy with a Mac is a multimedia producer.

Various Definitions Used

At least three of the four following media words, pictures, sound and video must be used simultaneously for an application to fit into the multimedia category. Such applications must also be interactive. Interactivity means users enjoy prompt two-way communication with the system through a user-friendly interface. The terms New Media and multimedia apply to computer components, operating systems and software applications.

CESAM: http://www.cesam.fr/

(Interactive) multimedia can be defined as an interactive presentation of electronic (digital) information that incorporates two or more media elements, e.g. graphics, text, animation, video or sound, for playback on a computer moderated device.

DJC 96

According to the Interactive Multimedia Arts and Technologies Association (IMAT), multimedia empowers the user by integrating the controlling and processing capabilities of computers with digitally stored information that can be presented using text, graphics, sound, animation, and still or motion pictures. The distinguishing factor for multimedia over other more traditional media is the computer involvement as a controller, manipulator and delivery platform.

IMAT: www.imat.ca

New Media can be described as encompassing, singly or in combination, and whether interactive or not, services and products that make use of video, audio, graphics and alphanumeric text; and involving, along with other, more traditional means of distribution, digital delivery over networks interconnected on a local or global scale.

kquote>

[Translation]

According to the definition that is most commonly accepted and used in the industry, a multimedia document must be digital, integrate at least three of the four forms of information (text, sound, image and video) and be interactive.

ScienceTech (1996): http://www.sciencetech.com

[Translation of portions not in quotation marks]

The North American Industry Classification System (NAICS), which has been in place since January 1999, classifies multimedia as follows:

Multimedia activities fall into the Information and Cultural Industries category (NAICS code 51). According to this system, the definition of this type of activity is provided by the following statement: "The value of these products to the consumer lies in their informational, educational, cultural, or entertainment content, not in the format in which they are distributed.The main components of this sector are the publishing industries, including software publishing, the motion picture and sound recording industries, the broadcasting and telecommunications industries, and the information services and data processing industries.

This system classifies the multimedia industry under software publishing, which is defined as follows: This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction. Establishments in this industry carry out operations necessary for producing and distributing computer software, such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. These establishments may design, develop, and publish, or publish only. Software is any support, whether on CD-ROM, online or offline.

Economic Classification Policy Committee & Statistics Canada 1998;

Our Proposed Definition:

The definition of a multimedia product, according to us, is based on the following three criteria:

- A potentially interactive product
- A content product
- A digitally supported product

A Potentially Interactive Product

An interactive product is one that enables the use of a conversational model, in which the user converses with the application through a terminal, which is generally a computer, and can intervene during the process.

A Content Product

The content of a product may take various forms such as image, audio data, text and video. Some analysts consider that a multimedia product should contain at least three of the four previously-mentioned elements. We tend to emphasize the presence of content rather than its quality or diversity.

A Digitally-Supported Product

The digital support of the multimedia product may be fixed, as in the case of a CD-ROM or a DVD, or mobile, as in the case of the Internet, an Intranet or an Extranet.

Current Applications of Multimedia

The main areas of application of New Media which are most commonly found on the market and in everyday life are:

- Entertainment
- Education and training
- Health
- Visual animation
- Financial transactions
- Arts and culture
- Corporate services

Entertainment

Entertainment is the best-known area of multimedia application. The penetration of entertainment products occurs mostly in homes, generally through an online purchase of interactive games. The following products belong to this area of application: on-demand films, Digital Video Disk (DVD) films, video games and virtual game centres.

At this point, entertainment is the application area with the best return on investment. It is also one of the areas with the highest costs of development. Development costs for interactive games often reach several million dollars. Thus, the most highly skilled multimedia professionals are concentrated in this area.

Education and Training

Training and education (teaching) have a lot to gain from multimedia technologies. New Media introduce a more dynamic and vibrant environment to computer-assisted training through the integration of several media in the presentation of a subject. Dictionaries and encyclopaedias on CD-ROM are highly practical tools for the dissemination of information and knowledge.

Health

Multimedia brings a whole range of tremendously useful applications to health care practitioners. Some of the multimedia applications used in the neuralgic field of public health are: telemedicine, patient file automation, medical imagery, non-invasive surgery, and medical information through interactive terminals.

Visual animation

The field of visual animation has literally exploded with the appearance of multimedia-related technologies. Multimedia applications provide an opportunity to greatly enrich the visual quality of films shown to the public, both in animations (animated cartoons) and big screen special effects. The corporate advertising area has also gained a lot from multimedia applications. The main products in this area are 2D and 3D animation applications and special effects software applications.

Financial transactions

Financial institutions were quick to grasp the opportunities that multimedia had to offer for enhancing the efficiency and quality of their client services. These institutions could use multimedia applications to make their automated client services more user-friendly, while at the same time making current account transactions easier to manage.

Arts and culture

There are countless opportunities for art designers in the multimedia industry. Through virtual simulations, for instance, the audience-performer can be treated to an experience they could never enjoy without multimedia technologies. Online visual art opens the door to art to the public at large in a way that has never been seen before.

Corporate services

Companies use the expertise of multimedia producers to better disseminate information about their products and services. They also use this expertise to conduct e-commerce, a phenomenon which is in the midst of full expansion and which we will address later. Suffice it to say that e-commerce, which consists of business to business and of business to consumer transactions (Business To Business (B2B), Business to Consumer (B2C)), currently constitutes the product/market combination that is probably the main factor in the industry's growth.

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ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 2: E-Commerce

The Internet Phenomenon: History and Overview

The Internet is based on the Transmission control protocol/Internet Protocol standard, which was developed in the context of the Arpanet project in the 70s. The Internet's World Wide Web (WWW) layer was developed in the late 80s in Switzerland in the context of the European Organization for Nuclear Research (CERN). The Web operates on the basis of three keys: the Uniform Resource Locator (URL), through which an electronic address can be created for a document; Hyper Text Transfer Protocol (HTTP), through which documents can be located throughout the network and Hyper Text Markup Language (HTML), through which multimedia documents can be created.

In 1957, the USSR successfully launched Sputnik, its first satellite. In response to this definitive technological advance, the US Department of Defence created the Advanced Research Project Agency (ARPA) and assumed the responsibility for creating a reliable and decentralized communications network that could not be paralyzed by a nuclear war (if one part of the network were severed, communications could take another route).

In 1969, four university research centres linked up through the network. In 1971, approximately twenty American university sites were linked through ARPANET. They communicated through e-mail.

The success of ARPANET soon required a standard protocol that would enable the linkage of various machines and networks. The Transmission Control Protocol (TCP/IP) was created in 1974. Through this Protocol, information could be broken down into small packages for posting and re-assembly upon arrival, while Internet Protocol handled the transmission of these packages.

In 1983, 500 computers were recorded on the network.

In 1985, the NSF created its own TCP/IP network (NSFNET) and set up the first backbone designed to ensure the interconnection and sharing of resources on the big computers of American universities through high-speed (56Kbps) telephone links.

The Internet network was born.

In 1989, 60,000 university computers around the world were connected.

In 1990, DARPA shut down the ARPANET network activities.

In 1991, restrictions limiting the use of NSFNET to non commercial organizations were lifted and American companies started to become interested in the Internet.

In 1992, 1 million computers were recorded on the network.

In 1992, CERN (the European Organization for Nuclear Research in Switzerland) invented the World Wide Web, a hypertext based document consultation system.

In 1993, the NSF gave up its responsibility for managing the network; it gradually delegated the management of communications infrastructures to private access operators and providers and created the Internet Network Information Centre (INTERNIC) to manage the issuance of domain names in the United States.

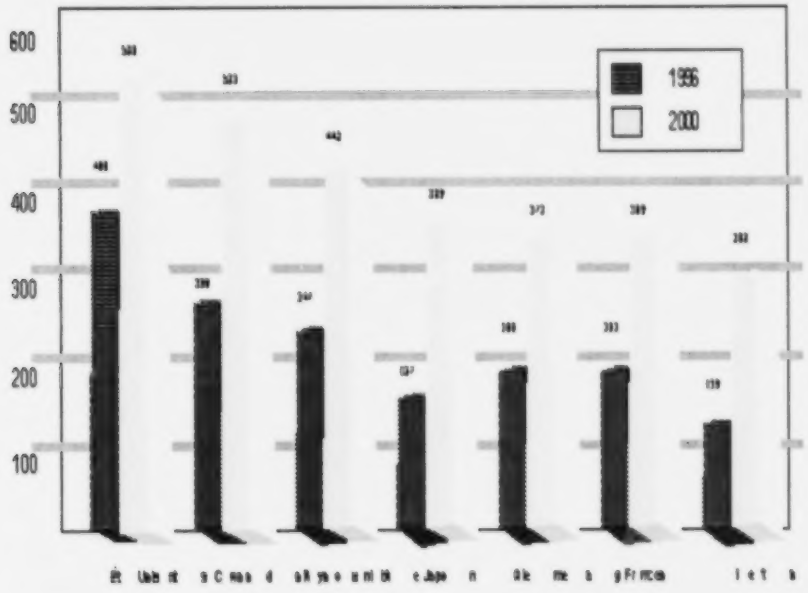
In 1994, commercial use of the Internet increased in the United States. At the same time, in France, private access operators and providers were offering the first network connection service opportunities (these were initially restricted to professionals and were costly, but they soon became more widespread and were made available to the general public at more reasonable prices).

In 1995, over 6 million computers were recorded on the network.

In 1998, more than 30 million computers were recorded on the network and the number of Internet users was estimated at 100 million.

The Number of Computers Throughout the World

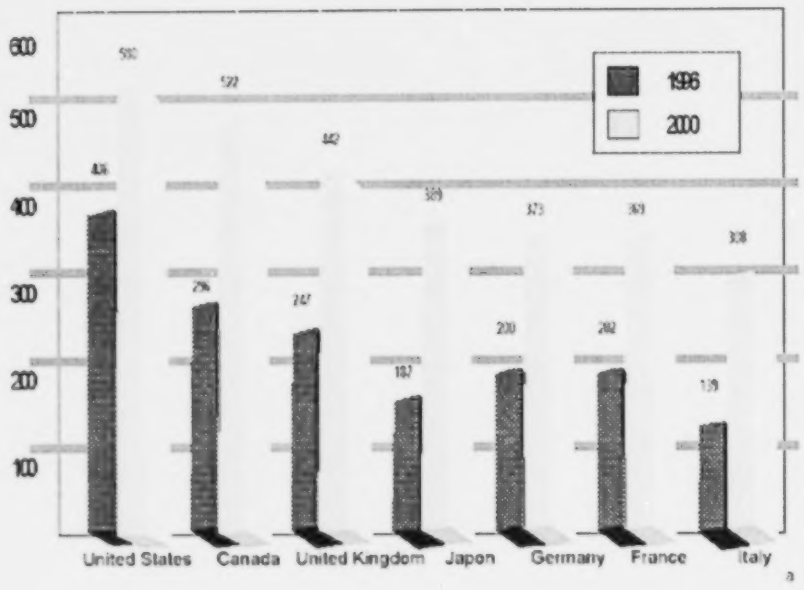
Personal computers per 1000 inhabitants



Source: American Electronics Association, according to Computer Industry Almanac Inc, in an article published in The Ottawa Citizen, Ottawa, on June 19, 2000

The Number of Internet Users Worldwide

Per 1000 inhabitants



Source: American Electronics Association, according to Computer Industry Almanac Inc, in an article published in The Ottawa Citizen, Ottawa, on June 19, 2000

These days, the Internet-based economy represents US$507 billion and employs 2.3 million people. The Internet-based economy has now surpassed the telecommunications and aviation sectors in terms of its contribution to global GDP. The Internet economy is catching up with the publishing (750 billion) and health care (US$1 trillion) sectors. If the Internet economy maintains half the growth rate it is currently experiencing, its contribution to global GDP should increase to US$1.2 trillion in 2002. 4

E-commerce grew by 127% from the first quarter of 1998 to the first quarter of 1999. It is expected to generate revenues in the order of US$170 billion in 1999.5

The Internet-based economy grew from US$64 billion in the first quarter of 1998 to US$107 billion in the first quarter of 1999. The University of Texas in Austin projected revenues generated by this economy in the order of 507 billion for 1999. According to that same source, the Internet economy should generate 3.2 million jobs. The Internet economy has surpassed the traditional aviation and telecommunications industries in the United States in terms of revenues.6

E-commerce

E-commerce over the Internet constitutes one of the major components of the new economy emerging before us. According to several economic analysts, it represents a technological upheaval akin to the appearance of rail transportation and the electric motor.

The e-commerce market is largely dominated by the United States. Even though the United States represents less than 60% of the Internet population today, e-commerce is restricted almost entirely to American companies such as Amazon.com, DELL, Microsoft, etc.7. According to some observers, the United States' lead should hold and bring it to 42% of the global e-commerce market in 2002. Europe would have 26% and the rest of the world would have 32%.8

Retail e-commerce is an emerging industrial sector with a job creation potential that is comparable to that of call centres. It has enabled Amazon.com to create 2,600 jobs in less than three years. It is estimated that more than 400,000 e-commerce related jobs were created in the United States in 1998. It is also estimated that there are currently more than 1 million people employed in e-commerce in the United States alone. E-commerce is based on the sale of information technologies, which generates US$100 billion and employs 2 million people in the United States alone. 9

The mass market in giant portals, which target the general public and certain communities, also confirms America's dominance. The fact that 45% of the 6.4 million members of the Xoom.com virtual community come from outside of the

United States is evidence of this. Furthermore, the big names in terms of the most frequently visited sites outside of the United States are often dominated by American sites or by local versions of American sites.10.

E-commerce experienced an annual growth rate of 128% between 1998 and 1999, attaining a global business volume of US$170 billion. The electronic market will reach US$3.2 billion by 2003. Furthermore, 2,000 secure servers are being created for e-commerce every month on the Internet. Forrester Research estimates that B2B transactions will reach US$1.3 billion (compared with US$50 billion currently) by 2003, and that B2C transactions will surpass US$110 billion (compared with US$10 billion currently).

Based on Dataquest estimates, the global software market supporting e-commerce was around 869 million in 1999 and the market should leap to 4.2 billion by 2002.11

According to estimates by Yahoo!, the Internet retail sales market reached 12.4 billion in 1998. The Zona Research firm recently published a study showing that the retail market on the Internet was actually US$10.4 billion in 1998 and that three quarters of retail market transactions took place in businesses (consisting of US$3.8 billion in computer sales alone). 12

Notwithstanding the various approaches and analyses, it is now evident that a major market in the order of several tens of billions of dollars will be emerging over the next few years. Some industries are starting to feel the effects of this new trend in very concrete ways.

These various conclusions about a given phenomenon can be explained by the adoption of different definitions of e-commerce. Some of them are restricted to transactions that take place entirely online (from the first visit to electronic payment on a secure server), while others consider that the purchase of a product in a store after research has been done on the Web also constitutes e-commerce.

E-commerce and multimedia

For most users, the Internet market represents an online network for access to electronic data (text and images). The Internet concept is purely multimedia since it consists of a series of standards that provide an opportunity to code, transmit and locate, for consultation purposes, not only text and images but also sound and video. Anyone fortunate enough to have high-speed access is well aware of this. For most users, who still access the Internet through telephone line connections, this multimedia aspect of the network is still nothing more than a potential.

However, Internet limits are transient. They are driven by the access network. Once high-speed access becomes more popular, the e-commerce market in multimedia products is bound to explode. This high-speed connection market should represent $15.3 billion by 2001.13

There is a new imperative in the industry: getting applications online. Developers are designing more and more of their products and services with a view to electronic distribution (Internet, Intranet, Extranet), and abandoning physical transmission methods such as CD-ROMs and DVDs.

A survey carried out by Wall Communications Inc. in 1998, revealed that 52% of companies involved in New Media projected that online distribution would become their main delivery platform by 2002, compared with 16% for CD-ROMs and DVDs.14

E-commerce in Canada

One of the main growth factors in the new New Media products and services market is the stronger penetration of information technologies. In the home as at work, the rate of penetration of computers is relatively high in Canada compared with other OECD countries. In 1997, Statistics Canada estimated that 36% of Canadian homes were equipped with personal computers, which was an 11% increase over 1996. In September 1998, Ekos Research estimated that close to 60% of homes had one.

Furthermore, when compared with other OECD countries, Canada has one of the lowest Internet access costs for consumers. The remarkable increase in the use of the Internet should also be pointed out. In October 1997, an Internet survey carried out by Statistics Canada on households revealed that 42% of homes that were connected spent more than 20 hours a month online and that 61% went online at least seven times a week. It also showed that the Internet was used mostly to send electronic mail (77%) and to access information (71%).15

In the winter of 1999, Statistics Canada estimated that in 1998 4.3 million Canadian homes (or 36% of all homes) had at least one member who used the Internet on a regular basis, compared with 3.5 million in 1997.

The rate of Internet use varied between provinces. The highest rate of connection was in Alberta (45%), followed by British Columbia (42%) and Ontario (39%). The lowest rate was in Quebec (26%).16

Another study into the phenomenon, conducted by Communications Management Inc. (CMI), estimated that by 2001, close to five million Canadian homes, or 40% of homes, would have access to the Internet, which would be twice as many as in 1998. According to CMI, this growth would occur mostly in homes that already had a personal computer, through the addition of modems and Internet access services.

% of Homes Using the Internet on a Regular Basis

- Canada 36%
- Alberta 45%
- British Columbia 42%
- Ontario 39%
- Nova Scotia 38%
- Prince Edward Island 35%
- Saskatchewan 34%
- Manitoba 34%
- New Brunswick 31%
- Newfoundland 29%
- Quebec 26%

Source: Statistics Canada, 1999

% of Canadian Businesses Connected:

- 1996 15.2 %
- 1997 30.9 %
- 1998 43.1 %
- 1999 65.1 %

Source: CFIB Internet Survey, 1996 to 1999

Only one out of ten businesses in Canada sells its products or services on the Internet. According to a Statistics Canada survey, e-commerce activity came to almost $4.5 billion last year in this country. However, these transactions only represented 0.2% of economic activity in Canada.

Estimated Internet sales have remained at or below 1.5% of the total in each of the activity sectors. Internet sales represented 1.3% of total sales receipts in the accommodations and food services sector, 1.0% in the information and cultural industries sector, 0.8% in the professional, scientific and technical services industry and less than 0.5% in the other activity sectors.17

Business to business e-commerce (B2B) was assessed at $9.57 billion in Canada in 1999, while the business to consumer (B2C) e-commerce market was assessed at $1.45 billion for that year. The total e-commerce market in Canada came to CAN$11 billion in 1999, or 6.8% of the global market. The Canadian e-commerce market should reach 94 billion in 2003.18

Proportion of Canadian Users who Have Made a Purchase Online (online order with or without online payment)

- 1996 11%
- 1997 13%
- 1998 17%
- 1999 25%

Source: ACNielsen, The Canadian Internet Survey, 1996, 1997, 1998, 2000

In 1998, more than 244,140 Canadians made at least one online purchase in the last two months of the year according to a survey conducted jointly by IDC Canada and ITAC. During that same period, 56,412 Canadians made more than five purchases. In 1997, the equivalent figures came to 244,140 and 81,915 respectively. The average purchase amount varied between $20 and $50. In 1998, 321,654 Canadians made an online credit card purchase, the other payment method having been identified as online order/offline payment.19

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ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 3: A Description of the Industry

An industry in full growth

At this point, small businesses are an important, if not dominant, force in the multimedia sector. The Coopers and Lybrand study on participants in this sector in the New York area, for instance, revealed that 49% of them were small businesses with sales under $5 million. In the New Media sector, small businesses enjoyed certain advantages since they were able to respond quickly to constantly changing demand and to take advantage of rapid technological progress. However, they often lacked the required skills in management, funding, setting up strategic partnerships and distributing and marketing their products and services.

Partnerships are crucial in the multimedia area, whether in developing, marketing or selling a new product, having access to technologies, publishing or distributing products, or providing or obtaining content.

Many of the conventional media companies, such as newspapers, radio, television, advertising and public relations, employ an in-house New Media department , which enables them to adapt to technological trends.

The multimedia production chain

According to the CESAM Multimedia Consortium, the multimedia chain comprises the full process for developing a multimedia application from initiation to distribution. It consists of the following stages:

- Needs and specifications
- Scripting
- Content development
- Programming
- Mediatization
- Integration
- Marketing and distribution

Needs and Specifications

The purpose of this stage is to develop the specifications that will guide the design and production of the multimedia application. These specifications, which are submitted to the client (based on a specific mandate) or to the lender (producers, etc.), set out the parameters.

The needs analysis and the development of specifications are essential to the development of any multimedia application for the following two reasons:

- The technology is evolving very rapidly; and
- Projects take a long time.

This document has to be complete and accurate since the client's requirements may change at the same rate as the technological innovations breaking onto the market. For this reason, it is important to specify ahead of time the technological means that are to be used, area then to apply them.

Interactive scripting

The purpose of this stage is to produce the multimedia application scenario based on the requirements and details set out in the specifications. The deliverable is submitted to the client for approval prior to the start of production.

Scripting is often done in teams. Several people draw and generate ideas for several weeks until they manage to propose a concept and an interactive scenario for application. Then, interactive writers determine how the information will be presented by assigning it to specific media. The outcome is a detailed and precise plan of the multimedia application that is to be developed.

This stage lays the groundwork for the rest of the project. The individuals working on this stage are generally not those who will then produce the application.

Content development

The purpose of this stage is to define and develop the content (text, audio sequences, fixed and animated images, video sequences) of the application according to the guidelines that were developed.

There are two ways of developing content. It can be done in-house, which is a big job, or purchased. For instance, an encyclopaedia can be produced by defining the interactivity and using an existing content.

Programming

The purpose of this stage is to do the programming and convert the formats of the various objects that are inherent to the multimedia application in order to produce a prototype that will be assessed and submitted to the client for approval.

A great deal of programming is involved in the development of certain types of multimedia applications such as multimedia games. However, the development of training applications and information ports does not require a lot of programming.

Most multimedia applications are developed with software known as authoring systems. These are designed to simplify and accelerate the development of multimedia software.

However, any functionalities that are not provided by the authoring system have to be programmed. It should be noted that most authoring systems have their own programming language.

Mediatization

The purpose of this stage is to complete the various items that constitute the application, as defined in the interactive scenario and developed during the content development stage. Mediatization, therefore, consists of producing the content and translating it into image, sound, text and video in a digital format.

Specialists are involved in the design and development of each of the media. If the production team does not include specialists, this expertise has to be obtained from an outside firm. Every media should have the highest quality of production.

Integration

Integration probably constitutes the most complex and lengthy phase of a multimedia production. The various computer programs and the numerous documents obtained during mediatization, whether in the form of images, text, video or sound, have to be assembled. The producer generally relies on an authoring system for the integration of digital media.

Since very few people currently have the required expertise, media integration often ends up presenting a challenge.

Evaluation

The purpose of this stage is to test the prototype developed on the basis of the starting scenario through various tests (navigation, aesthetic quality, etc.), and to make the corrections needed to comply with the desired standards.

Marketing and distribution

The purpose of these last two stages is to market and distribute the completed application based on the support set outs in the production specifications.

The marketing platform having been selected while the specifications were being determined, this stage has to take all of the material that has been developed and bring it to the targeted platform.

In the case of the Playstation marketing platform, for instance, the publisher took the material and transposed it onto this platform.

The traditional approach was to develop a version and set up a production team for each of the targeted platforms. These days, the new development technology is used to produce very high quality original material, which can then be adapted to different marketing platforms.

SECOR used to draw the multimedia production chain in the following way in 1997:

Design/Development

Content Design

- Author
- Screen writers
- Television/film producers
- Publishers
- Museums
- Libraries

Application Development

- Developers
- Animation specialists
- Programmers

Editing

- Multimedia Publishers

Distribution/Marketing

Physical Distribution

- Library
- Software retailers
- Large areas
- Video clubs
- Catalogues

Network Gateways

- Interactive television
- Private networks
- Internet sites
- Video clubs
- Interactive booths

Use

Equipment Technologies

- Computers

- Decorators
- Optical disks
- Navigation software

Source: SECOR 1997

The players in the production chain

Different individuals perform different tasks throughout the production of a multimedia application. The key players in the production chain are: 20

The multimedia developer
The multimedia industry component that designs and produces multimedia elements and integrates them into a multimedia production.

The multimedia publisher
The multimedia industry component that markets, promotes and funds multimedia products.

Business product developers
The multimedia industry sector that produces titles for commercial and teaching establishments.

Developers of products for the general public
The multimedia industry sector that produces titles for the general public, including games and products focused on entertainment and lifestyle.

Business models

There is currently no generic business model for New Media. Whereas the demand for multimedia services in response to specific business needs is growing strongly, mass market demand has still not grown as hoped. New Media is currently having limited success with the business model based on advertising revenues, where the sponsor buys space on a site or other online services (the preferred model among distributors). Another model based on cable subscriber fees has shown an interesting degree of viability in niche markets, but has not yet secured mass appeal.

Whereas demand among business clients is on the rise, that among institutions (government, education sector, health care sector, etc.) and especially among consumers (mass market) is not generating the level of penetration expected. This is one of the factors slowing the entry of players from traditional media into the New Media sector, since the former are not familiar with the higher risk parameters in this emerging industry.

The production of content for the business market generally operates along the lines of the counselling services model: the client places the order for a CD-ROM or a Web site with a company specializing in multimedia, which then fills it. The active element in the chain is always the client, generally a large company or a public organization (government, municipality, school, museum, etc.), which is fully responsible for funding and distribution. More and more often, this client acts through a public relations or an advertising firm. In some cases, this intermediary internalizes the design and development functions and becomes a full-time player in the production chain.

The business CD-ROM market is largely between companies (institutional information, annual report, promotional material, sales catalogue, etc). Since 1996, the Web site market has followed the same model (rollout of the extranet).

In the business services industry, offline distribution of a product is not much different from the dissemination of an online service. The designer-developer's client is the owner of the CD-ROM it ordered and the one that distributes it internally or externally. In the case of a Web site, the client can host and manage the Web site itself or contract this function out. In every case, the client is solely responsible for the final product. It distributes or markets it according to its priorities.

Companies market is for which the market is the general public follow the cultural industry model. The production and distribution chain for a CD-ROM for an international general public follows the same process of design-development-editing-distribution.

This model occurs, with a few variations, in all of the multimedia industries in the United States, Europe and Japan. On the other hand, it remains largely hypothetical in emerging areas like Canada, where the production and distribution chain is undergoing a lot of changes. Not many Canadian developers co-operate with publishers. This avoidance of the publishing function explains the weak impact of Canadian production.

CD-ROM developers quite often try their luck directly with distributors, and even with the general public. The content

designer/owner undertakes development internally. Most publishers or apprentice publishers also do in-house development. Generally, the borders between the different functions are not well defined and there is a lot of overlap.

Companies operating in the interactive games segment tend to adopt two main business models. The literature reviewed and interviews conducted suggest that most of them, especially the big players, look after the marketing and distribution of games that were developed within companies that are external to the business. Others, though less numerous, look after all of the operations in the production chain, from programming to physical and electronic distribution. The console games segment operates through licenses issued by Sega, Sony and Nintendo to a certain number of outside developers. These three giants receive numerous demos of interactive games every year and they select those which best match their commercial requirements and they then generally buy the rights in order to then take over their marketing and distribution.

Revenues

In terms of revenues, multimedia sector sales appear to average between $80,000 and $100,000 per employee. The sector as a whole would, therefore, be earning revenues in the order of $1.4 to $1.5 billion based on estimates of the number of jobs. A combination of the studies providing estimates of the industry's revenues at a national scale suggests revenues in the order of $2 billion.

The sector is undergoing rapid expansion, growing at the rate of 20% per year according to estimates (some studies assess the growth rate at 30%). Numerous factors contribute to this growth, including Internet access, the drop in the price of computer and software equipment and the convergence of the various technologies. A recent survey by Multimediator Strategy Group estimated industry-generated revenues at $3.5 billion. This same survey revealed that 70% of these revenues came from exports.

Numerous New Media services are provided through commercial Internet or Intranets. The explosion in the number of Internet users is bound to have a significant effect on the sector's growth.

The uninterrupted drop in the price of computer material and in software applications is an important factor in the sector's growth, thus making the purchase of multimedia systems far more affordable for companies and individuals. More and more companies are acquiring videoconferencing systems and many of them are using portable multimedia computers that can be connected to a portable ACL projector, which enables users to take their multimedia presentations on the road.

Forecasters expect the multimedia to some day connect the various computer, telephone, fax, compact disk player and video camera technologies into a single powerful technology centre. For the time being, multimedia is used mainly in the computer field.

In Canada, 26% of industry revenues come from the design of Web sites. This percentage rises to 71% for companies that concentrate specifically on this slot. Education constitutes the second largest source of revenue with 19% of revenues generated by this segment of the market. Training accounts for 13% of industry revenues. In addition, half of corporate revenues come from the business market (53%), education represents 20% of the market, governments represent 10% and the various public organizations represent 4%.21

Real and Projected Business Revenues

	Real Revenues		**Projected Revenues**		
	1997	1998	1999	2000	2001
	(152)	(152)	(152)	(152)	(152)
	%	%	%	%	%
Less than $1 million	79	77	63	44	32
$1 million or more	15	19	28	34	44
Unknown/rejected	7	4	9	22	24

Source: DJC, 1999

Economic viability

The financial models of the multimedia industry are still evolving. Unlike the already well-established industries where gross and net margins the multiples with which public firms are coming to terms and on which the rates of return on investments are known the industry's current standards are not representative of the longer term, when the market will reach maturity. The spread between the market value of businesses and their book value is a good illustration of the expectations of entrepreneurs and investors for an interesting medium-term investment, given the rather mitigated economic viability of the industry's businesses at this point.

Stage	Size of Company	Profitable?	Funding	Stable Growth?	Region
Depends on the creative ideas of a person	Very Small (1 to 5 employees)	No	Private, family, careful investors	No	United Kingdom
Expansion	Small (3 to 10 employees)	No	Careful Investors, private sources	Sometimes	Quebec, Toronto, Vancouver
Seeking Investors	Small to Medium (10 to 50 employees)	Not yet, in most cases	Venture Capital, public shares	Yes	New York
Matured	Medium to Large (50 or more employees)	Yes	Venture Capital, public shares	Yes	San Francisco

Source: Pricewaterhouse Coopers 2000

53 % of companies surveyed indicated that they were economically viable. 45 % indicated that they were not economically viable.22

The multimedia industry combines the features of two industries: the cultural and entertainment industry and the computer industry. These two industries are known for their high level of risk and their search for economies of scale and scope:

1. In the cultural industry, fixed costs generally represent 100 % of production costs. Major expenditures have to be made before there is some idea of the volume that will be consumed.
2. The computer industry requires significant expenditures on learning given the amount of time and investment needed to develop tools and to effectively master them.

The Canadian multimedia industry is still young and fragmented :- many small players are in intense competition and their means of funding are not always up to meeting the needs for the development of major applications.

Seniority

The sector is relatively young, which is not surprising since this is an emerging industry. A survey of the multimedia in Toronto revealed that a little more than half of this region's companies (53%) were set up between 1994 and 199723. A recent study by Multimediator Strategy Group revealed that 90% of the companies surveyed (188 out of 522 companies targeted) had been in operation for less than 7 years.24

Funding

According to multimedia industry leaders, companies are still generally under-funded and they do not have the necessary means to ensure their development. Although they now have access to government support programs, these sources of funding remain limited and oriented to product manufacturing rather than business development. Venture capital is very scarce since managers in this area remain highly cautious.

The funding difficulties encountered by Canadian companies operating in the multimedia area may be explained by several factors, including the following:

- The sector consists of several small companies.
- Multimedia companies generally have few tangible assets to offer lending institutions as guarantees.
- The industry has an inherently high level of risk. Its products are a result of research, development and experimentation; guarantees of success are often impossible to verify.

- The multimedia sector is still relatively unknown in the traditional funding sector; lending institutions are often timid in terms of the amounts granted.
- There are very few project funding mechanisms in the multimedia sector serving the general public in Canada.
- There are not many prevention mechanisms in the sector. Multimedia developers serving the general public market segment often have to assume practically the entire production and venture capital budget.

In 1999, 61% of Canadian multimedia companies had access to national funding, while 6% of companies received funding from foreign sources. The main sources of business funding are, in order of use, governments, banks and personal sources. Business access to government funding has increased by 24% since 1995. Financial lease companies and banks are lagging somewhat in their support for multimedia entrepreneurs. Among the DJC (1999) survey respondents, 60% expected to seek outside funding over the following twelve months. A majority (56%) of respondents indicated that they would be seeking funding for less than $500,000.

Human resources

The Canadian multimedia industry is undergoing significant growth, which means that the pressure is on to develop the human resources and skills that are needed to enable companies to meet the challenges of marketing and globalization. The process for recruiting, developing and retaining a creative and highly technically skilled labour force will have to be adapted to address the following main issues:

- Access to a sufficiently large labour force pool that can meet the industry's requirements.
- The acquisition or development of specific skills.
- Employment conditions that promote the development and retention of the labour force.

The majority of companies (51%) have fewer than 10 employees, and 34% employ between 10 and 30 people.25

The Number of Employees

Number of Employees	1995	1997
0 to 4	33.3%	24%
5 to 9	23.4%	31.5%
10 to 19	16.7%	18.5%
20 to 49	13.3%	9.3%
50 to 99	13.3%	7.4%
100 or more	-	9.3%

Source: SECOR 1997

After experiencing phenomenal growth, the Canadian multimedia industry is now going through a period of consolidation that is expected to continue for the next few years. Fewer companies are emerging and existing companies have a tendency to merge in order to form real SMEs or much larger entities. This leads us to believe that the average number or employees actually lies somewhere around 20 rather than 10, as was the case in 1997.

Of the main Canadian clusters, Quebec is the one with the largest proportion of multimedia companies employing 11 or more full-time employees.

Salary structure

According to an Industry Canada and IMAT study (1995-96), the salaries earned by multimedia specialists range between $35,000 and $65,000 and are paid mainly to management, sales and administration staff. Employees in charge of design and technical aspects tend to be paid somewhat less.

The hourly wages of contract workers and part-time employees varies between $35/hour and less for beginners and more than $80/hour at the highest level.

Salaries in the area of administration and sales are more than $65,000 per year at the top of the scale (47% of companies) and less than $35,000 at the bottom of the scale (49% of companies). Design and technical staff tend to be paid much less

than administrative staff. Salaries at the top of the scale range between $35,000 and under $65,000 for both design (57% of employees) and technical (47% of employees) staff.

Administrative staff are not generally paid on an hourly basis, but design and technical staff are paid between $80/hour at the top of the scale, which applies to 20% to 33.3% of employees, and less than $35/hour at the bottom of the scale, in the case of 50% to 75% of them. Compared with 1995, there has been an overall increase in the percentage of employees in the range below the hourly rate of $35.

On average, administrative and sales staff work more hours (46 hours on average) per week. Staff in the three job categories (administration, design and technical) in medium-sized companies tend to work more hours per week.26

Sector-related jobs

Since multimedia encompasses a wide range of products and services, a large number of jobs fall into this category. The following jobs are found directly in the multimedia sector:

- computer game designers
- computer graphics designers
- television teaching programs designers
- content producers and researchers
- writers and revisers
- graphic designers
- software designers/programmers
- systems designers
- Web site programmers
- video, film and animated film producers
- publishers
- marketing, sales and administration staff
- communications experts
- project managers
- Internet and Intranet site designers

The 1999 study by Technocompétences identified eleven job profiles in the multimedia area:27

- Producer
- Project manager
- Designer-writer
- Content analyst
- Artistic director
- Computer graphics designer
- 2D and 3D animator
- Integrator
- Web designer
- Marketing director
- Sales director

Skill requirements

Creativity, technical skills, project management skills and knowledge of the sector, such as the design of educational and game programs, are among the skills needed in the multimedia sector.

Although it may not be necessary to be an engineer to succeed in New Media, it is important to be comfortable with the technology. Software programs and computer equipment are constantly changing and it often happens that nobody in the company has the time to train those employees who are less skilled in this area. Mastering a complex software program may require hundreds of hours of training.

The experiences of participants in a recent qualitative study into the Canadian New Media (DJC 96) provided an overview of its labour force's diversity. The producers of multimedia products who took part in this study were teachers, lawyers,

graphic designers, journalists, software engineers, television and film producers, advertisers, computer equipment designers, marketing specialists and writers.

The skills most highly sought by these entrepreneurs included creativity, technical skills, project management skills and know-how in the areas of educational program development and game design. The general qualities required of workers included multi-tasking, interpersonal skills and the ability to understand the needs of consumers and clients.

Training and development

Given the rapidly evolving nature of the sector, employers are constantly faced with the need to keep their employees on top of the latest technologies and to update their skills. Most on-the-job training occurs in large companies since the small ones, naturally, lack the financial means to provide it.

Training costs create a problem not only for businesses in the sector, but also for teaching institutions. Public and private training institutions are beset by the costly investments and constant updating of the already expensive equipment and software that are required for training in New Media.

> Approximately two thirds (68%) of companies provide formal or informal training.
> Compared with 1995, the number of university graduates is higher than the number of graduates from other institutions.
> The proportion of employees with university degrees fluctuates between 53.8% among design staff and 76.6% among management and sales staff.28

Characteristics affecting human resources

The multimedia sector is evolving rapidly in terms of technological breakthroughs and needs a specialized labour force that has as much technical skill as creativity and is prepared to adapt to new needs and better itself. Digital Media Champion Group (DMCG), established in Ontario, expressed the need for these two types of skills most eloquently. According to this company, in order to generate a wide range of products and services, the digital media sector relies as much on the knowledge and skills of the content industry, in terms of design, as on the technical knowledge and skills of the computer industry in order to introduce a wide range of products and services.

There are two aspects to the concerns held by the sector's companies with respect to human resources: on the one hand, the insufficiency of resources and, on the other hand, their quality. In general, employers believe that the educational system cannot respond to the strong demand for skilled labour with technical and creative skills throughout the supply chain. Learning weaknesses include the lack of training adapted to the industry's needs, the overly general training and a lack of attention to the elementary skills required to work in the industry. In terms of the resource shortage, the competition for workers among various countries throughout the world, especially the United States, make it difficult to find enough skilled labour.

As the sector expands, the demand for resources will continue to be felt. As an example of the rapid growth of multimedia, a Coopers and Lybrand study of the New York industry projected a 138% increase in the number of full time jobs over the next three years. Industry Canada expects that training in the multimedia area will create 9,500 permanent jobs by 2005 in this segment alone.

Labour force shortage

Strongly dependent on the quality and know-how of its workers, the New Media industry is having more and more difficulty finding enough skilled resources with which to fulfil its expansion plans.

The industry is belatedly undergoing the same phenomenon that was experienced by the information technologies sector: a structural labour force shortage. New Media is based on the convergence of four disciplines (data processing, arts-culture-communications, telecommunications, and business), unlike the information technologies sector, which is heavily based on data processing.

The industry is suffering from a qualitative imbalance between the supply of training and the needs of participants. Nearly all of the multimedia courses that are provided (i.e. computer graphics software courses, animation techniques) address the technical aspects of mastering multimedia tools. Yet, the sector needs value-added educational programs that combine all of the skills profiles needed for the training of New Media high level professionals who will set Canadian companies apart from their international competitors through their multimedia contents.

In 1999, more than four out of ten companies (43%) considered that it was more difficult to find employees with technical and design skills than ten years before.29

There appear to be labour force shortages in the following occupations: interactive product creators and designers, producers, artists and graphic designers, programmers, company representatives, administration staff, systems designers and marketing specialists. Management is seen as one of the areas with the greatest labour force shortage.

Education in Canada

Canada can boast about having succeeded in developing one of the most diversified and open national training infrastructures in the world. Canada has one of the most highly educated populations in the world, with nearly one out of two Canadians having pursued post-secondary studies. Canada is also one of the countries that is most involved in publicly funded education. At 4.8%, Canada has the highest proportion of public expenditures dedicated to post-secondary education, compared with the OECD's average of 2.7%.30 It should be noted that the Canadian educational system falls under the responsibility of the ten provinces and three territories (including Nunavut). The Canadian education system, which has both public and private schools, provides free primary and secondary level education to all Canadians in order to ensure compliance with the statutory obligation to attend school until age 16. Around five million youths currently attend primary and secondary school in Canada. More than one million youths receive higher level education in the 200 or so technical institutions and community colleges. Finally, around half a million students are registered in the hundred or so universities across Canada.31

Canadian multimedia training institutions are true incubators of the digital economy. The training provided by these institutions has the advantage of covering the whole range of the industry's needs. Numerous training institutions, several of which are internationally recognized, enable Canada to position itself at the forefront of the new economy that is emerging before our eyes. Canada's entry into the new millennium, which will be multimedia, is guaranteed by an impressive assortment of schools and universities providing state-of-the-art multimedia courses all across the country. In addition, the growing interest in multimedia among young Canadians is opening some highly encouraging prospects for multimedia producers.

The list of institutions providing multimedia training is appended.

Canada

Updated: 2004-05-31

Industry Canada Industrie Canada

ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 4: Regional Multimedia Industries

Given the absence of a clear definition that is accepted by all of the players in the industry, it is rather awkward to set a definitive figure on the number of companies evolving in this industry. Yet, with the help of an overview of studies in this area and following discussions with associations of multimedia producers who are members of IMPAC, we are proposing the following numbers for Canadian companies operating in the multimedia industry.

Province/Region	No. Companies*	Proportion
Ontario	600 (400)	26.1%
Quebec	600 (400)	26.1%
British Columbia	500 (300)	21.7%
Atlantic Canada & Prairies	600 (150)	26.1%
Total	2,300 (1,350)	100%

Source: IMPAC 2000
*The lower estimates appear in parentheses.

The Canadian multimedia industry is presented by region. The five regional industries that are listed are, respectively, the Atlantic Canada, Quebec, Ontario, the Prairies and British Columbia. Since the degree of development among these industries is uneven, the literature and degree of knowledge vary according to the region studied. Thus, the multimedia industry in the two least populated regions, the Atlantic Canada and the Prairies, will receive a more cursory description than that in Quebec, Ontario and British Columbia, which house the three main multimedia industry clusters in Canada in Montreal, Toronto and Vancouver.

A recent study by Pricewaterhouse Coopers indicates that an industrial cluster is defined by the following three main criteria:

- Close business connections, either formal or informal
- Geographical proximity
- Industrial autonomy

There are purportedly 200 technological clusters across the planet, most of them in the United States, 26 in Japan, three in Canada.33

For each region, we will present companies that have distinguished themselves through their creativity and dynamism. A review of recent articles from newspapers and specialty magazines, bolstered by a series of interviews with the regional members of IMPAC, helped make the selection of the firms that provide a good illustration of the current dynamism of the Canadian multimedia industry. Finally, a brief list of companies operating in the key segments occupied by the Canadian industry is provided.

Atlantic Canada

Atlantic Canada includes Newfoundland, New Brunswick, Nova Scotia and Prince Edward Island. Stretching over a broad geographic area, these provinces are home to a population that is rather unevenly spread between the main cities and the rural areas. In this region, the companies operating in the multimedia industry are located mainly in the provincial capitals: St. John's, Newfoundland; Fredericton, New Brunswick; Halifax, Nova Scotia and; Charlottetown, Prince Edward Island.

The regional multimedia industry is not lacking in dynamism. Public decision-makers and industrial players generally agree that the move to open up to the digital economy was an essential condition for economic development and prosperity.

Inevitably, the multimedia industry is emerging and developing at the periphery of local industries and their expertise. The petroleum and maritime industries are calling more and more on the multimedia companies to invigorate and revitalize their advertising, marketing and training strategies. As well, there are multimedia firms in this region that have developed innovative training and educational products, which are recognized by the industry as being quality products. Finally, the large tourism industry in this region has contributed significantly to the development of multimedia products requiring expertise and know-how in the most exportable area.

The following multimedia companies operating in Atlantic Canada have demonstrated their ingenuity and dynamism in designing products and services meeting the needs of the highly demanding New Media industry.

Newfoundland

X-Wave Solutions
St. John's/Newfoundland
www.xwavesolutions.com

X-Wave Solutions holds most of the multimedia market in Newfoundland. This booming company recently sent a team of eight managers to Ireland to search for new investment opportunities.

MediaTouch
St. John's/Newfoundland
www.mediatouch.com

MediaTouch, one of the leaders in the multimedia industry in the Atlantic Canada, provides multimedia design services in the training, education, Intranet and Extranet design areas. It operates in the petroleum industry, and in the aerospace and public education segment. Its key clients are: the Canadian Space Agency, the Hibernia project, and the Department of Education of Newfoundland and Labrador.

Zeddcomm.com
St. John's/Newfoundland
www.zeddcomm.com

Zeddcomm is a young company, winner of various awards and operating in the health care segment on the design of CD-ROM titles. Its clients include NASA and the Government of Alaska.

Idon East
St. John's/Newfoundland
www.idon.com

The Financial Post Magazine declared Idon East, designer of the New Media Mentor, one of the 25 most promising companies in the New Media software field.

Nova Scotia

MathResources
Halifax
www.mathresources.com

MathResources, one of Nova Scotia's leading firms, is meeting the educational needs of institutions in Connecticut, Vermont, Maine and Massachusetts. In 2002, more than 5 million children in India will be using one of the company's products. MathResources produces educational CD-ROMS such as the Harper Collins Dictionary of Mathematics and MathProbe.

EOA Scientific Systems Inc.
Halifax
www.eoascientific.com

EOA also operates in the educational products segment. It also produces interactive games that reproduce virtual realities. Its products are recognized across North America. The Earth Station Library is even recognized by the State of Texas as an equivalent to the large section course in natural sciences.

Collideascope Digital Productions
Halifax
www.collideascope.com

Collideascope develops multimedia content for the film industry, interactive television and the Internet. The firm is currently developing a Web-TV project.

Salter New Media
Halifax
www.salter.com

Salter New Media, a subsidiary of Salter Street Films Ltd, designs content in the Internet universe. It developed InvestorCanada.com and is currently developing AOL Canada's online interactive service.

New Brunswick

Crescent Studio
Fredericton
www.CrescentStudio.com

Crescent Studio designs corporate Web sites that integrate e-commerce and online training solutions. Its clients include the prestigious Hewlett-Packard company as well as Sprint Canada. The Department of Foreign Affairs and International Trade recently named Crescent Studio exporter of the month.

LearnStream
Fredericton
www.learnstream.com

LearnStream is a multimedia firm supplying its clients with learning software for training and education on Internet and CD-ROM supports. It operates mainly in the corporate services segment and includes health care institutions and National Defence among its clients. Two-time recipient of the Canadian multimedia award, the company has won several awards and honourable mentions over the past ten years both in Canada and abroad.

HeyNetwork.com

HeyNetwork provides its clients with the full range of Internet services needed for B2B and B2C trade. The company received two awards at the 2000 Newfoundland multimedia awards (www.discribe.ca/multimedia).

Prince Edward Island

SilverOrange
Charlottetown
www.silverorange.com

SilverOrange produces Extranets and Intranets for commercial purposes, in the course of which it develops e-commerce solutions. It recently developed an integrated tourist reservation system for Prince Edward Island.

Simscape
Charlottetown
www.simscape.com

Simscape developed a series of multimedia applications for the management of water plants in Canada. The company recently developed promising partnerships for the management of the Internet portal with investors from Hong-Kong.

Quebec

It is generally agreed in Quebec that information and communications technologies hold a key place in the economic vitality of the province and that it is strategically significant in the competitive position held by Quebec on the North American stage.

A study done for British Trade International suggested that Quebec's multimedia industry seemed to be the most dynamic and innovative one in Canada.34

Several factors have played a part in the tremendously rapid emergence of this industry. The Quebec government's commitment to the industry's funding manifested itself through a whole gamut of programs and measures that are generally recognized as being the most generous in Canada. The implementation of the Cité du commerce électronique and the Cité du multimédia in Montreal are prime examples of this.

This sector's development is undeniably favoured by its geographic situation, which promotes both North-South trade with the American East Coast and East-West trade with the Canadian and European markets.

Montreal, furthermore, is home to a skilled and often bilingual labour force pool trained at recognized specialized institutions such as the NAD Centre. The dynamism and creativity of its entrepreneurs certainly constitutes one of the most important pillars of development in the industry. A rich pool of visual creations (film and animation), together with a well-established computer consulting services sector, have enabled Quebec's multimedia industry to progress with confidence and speed. Finally, it is important to note the existence of a highly organized industrial milieu, including organizations such as the APMQ, CPLQ, and Alliance NumériQC, which work closely to ensure a vigorous promotion and attention to all bodies in order to defend and promote the interests of Quebec's multimedia producers.

- Quebec's multimedia sector has between 400 and 600 companies employing 4,300 individuals
- The Quebec sector specializing in multimedia editing generated revenues in the order of $1.2 billion in 1997*
- Quebec multimedia production started about 5 years ago
- The heart of this activity sector consists of designers/developers, including some 280 companies and 3,000 jobs
- There are also some 800 ancillary companies and 150 training and financial support services
- 70% of these companies have been in operation for less than 5 years and have fewer than 10 employees
- 67% of jobs are located in the Montreal metropolitan area, 12.5% in the Quebec metropolitan area and 8.1% elsewhere in Quebec
- Corporate and institutional markets alone account for 80% of these companies' revenues

Sources: CESAM 2000, ScienceTech 97, BSQ 97, APMQ, Michel Cartier Pricewaterhouse Coopers 2000 IMPAC
* Low reliability, margin of error of + $600 million

The Montreal multimedia cluster

- 46% of companies concentrate on design and development, 13% are Internet access providers, 6% are distributors, 17% look after equipment and software, and 32% look after related services
- 37% have fewer than 5 employees, 40% have between 6 and 25 and only 6% employ more than 100 people
- The average age of employees is 30
- 50% of companies have been in existence for five years or less (1998)
- The key activities in the companies extend into different areas, including content design (e.g. educational CD-ROMs), production (e.g. promotional videos), post-production (e.g. on commercials), application development (computer programs developed in accordance with a company's requirements), the development of authoring software (e.g. video games), marketing (e.g. electronic marketing), editing (e.g. Internet site) and, finally, research and development (e.g. 3D and virtual technology)
- The majority of these companies (79%) operate essentially with the revenues generated by client orders and their internal working capital. Around 63% of companies receive combined funding from banks and public purses. Finally, only 15% of companies receive venture capital.

Sources:
M Cartier UQAM (November 1998) ROBITAILLE & ROY UM (1999), ScienceTech 97, BSQ 97, CESAM 00, IMPAC
* By including companies that do not specialize in multimedia editing, BSQ97 has estimated that the multimedia editing industry in Montreal generates revenues in the order of $5.4 billion.

The following multimedia companies operating in Quebec have demonstrated their ingenuity and drive in designing products and services meeting the needs of the highly demanding New Media industry.

Quebec

UbiSoft

Montreal
www.ubisoft.qc.ca

UbiSoft operates in 16 countries and markets its products in more than 50 territories. The group's design, production and distribution expertise are built upon complementary skills and cultural diversity. The company is one of the top 20 publishers in the world, has produced more than 1,200 titles in two families of products to date: games and educational/cultural. Applications have been developed for all formats: PC, DVD-ROM, DVD-Video, Internet, consoles (Dreamcast(tm), GAME BOY(tm) Color, Nintendo(r) 64, PlayStation(tm), etc.).

NetGraphe
Montreal
www.netgraphe.com

Netgraphe, the first company in the Internet market in Quebec to go public, is a leader in its field. Its activities include the production, management and marketing of its own general public Internet sites, in particular La Toile du Québec, Multimédium, Mégagiciel, and Économédia. It also develops and maintains Internet sites for a varied client base in companies and organizations. Furthermore, Netgraphe is involved in e-commerce and in Internet advertising.

Public Technologies Multimédia
Montreal
www.ptm.ca or
www.monmannequinvirtuel.com

Public Technologies Multimédia is establishing the virtual identity standard. A new way to look and be seen, a new way to be on the Internet, in the virtual and real world. The company recently negotiated an agreement with Intel, the American giant, to integrate parameters into computer chips that will enable the virtual model designed by the Montreal company to be more readily generated.

ZAQ Solutions Interactives
Montreal
www.zaq.com

This company is developing online and offline entertainment products and providing various services to businesses (corporate services). ZAQ is focusing on the mass use of interactive television to promote its know-how. Its most significant productions include the following sites: La Capitale, Vision Québec, Télé-Annonces, Pharmascience and Printemps du Québec 1999 (co-produced with Public Technologies Multimedia and Cossette interactif and recipient of a Boomerang award).

Ontario

Built on an infrastructure that is as evolved as it is diversified, the multimedia industry in the province of Ontario is positioned at the centre of the Canadian digital economy.

As the economic and political centre of the country, Ontario can rely on the presence of the major players-IBM Canada, AT & T, EDS-in its efforts to develop an industry supported by the computer and telecommunications industries. In terms of training, it should be noted that 1999 saw the entry of more than 5,000 university graduates into the Ontario labour force in the information and communications technologies area. The metropolitan Toronto region has an impressive transportation infrastructure at its disposal, both in terms of the quality of routes and the diversity of connections provided at Pearson International Airport, in Mississauga. Toronto is home to one of the most prestigious multimedia training institutions in America, Sheridan College.

Ontario's multimedia industry has somewhere between 440 and 600 companies. A recent study estimated revenues generated by Toronto's multimedia cluster at
$1 billion and noted that this cluster produced a wide variety of quality products and services, which are sold throughout the world as well as on the local Canadian market.

- Between 440 and 600 companies operate in Ontario's multimedia industry
- Around 8,000 employees work in Ontario's multimedia sector
- The majority of these companies have been in business for less than 5 years
- The majority of these companies are SMEs

- 70 % of the companies are concentrated in Toronto, with the rest in Kitchener/Waterloo (3.4%) and Ottawa (14.6%)

Source: Digital Media Champion Group 1998, Shauna Brail 1997, Coopers & Lybrand 1997 and IMPAC

Toronto's multimedia cluster

- Toronto's cluster is composed of around 440 companies
- 86 % of the companies operate in the content production and design sector
- 86% of the cluster's total revenues are generated in the national market
- 15% of revenues come from the American market
- Between 4,000 and 8,000 people are employed in this cluster
- High productivity: $100,000 to 150,000 per employee
- Rapid growth: 20 to 25% annually
- Total sales by Toronto's cluster were $1 billion.

Source: Pricewaterhouse Coopers 2000 and IMPAC

The following multimedia companies operating in Ontario have demonstrated their ingenuity and dynamism in designing products and services meeting the needs of the highly demanding New Media industry.

Ontario

SplashWorks
Ottawa
www.splashworks.com

Splashworks.com brings a new concept to the cyberadvertising segment: tailor-made electronic games designed for advertising. Since its start in 1998, Splashworks.com has produced 28 games for clients such as the CBC, Procter & Gamble, Samsung Electronics, Dr. Pepper/7-UP, Absolut Vodka and Shockwave/Macromedia.

ExtendMedia Inc.
Toronto
www.extendmedia.com

ExtendMedia, operating in the WEB-TV segment, designs interactive programs and manages the integration and delivery of interactive content in order to enable producers to acquire a more in-depth knowledge of their audience. The latest projects include CBC's Drop the Beat, CTV's Sportsnet and Wonders of the African World for PBS.

Non-Linear Creations Inc
Toronto
www.nonlinear.ca

Non-Linear Creations is the only Canadian company to appear on the list of Studio One companies, a list that is updated by the Internet Professional Publishers Association. It was also listed in the top 100 international companies involved in Internet development in 1999 and 2000 by the ChannelSeven.com magazine.

Blue Cat Design
Toronto
www.bluecatdesign.com

Blue Cat Design designs Web sites for businesses and other institutions (corporate services). Blue Cat is one of the first companies to have approached clients outside the country. Blue Cat Design was given the Ontario Global Traders Award for this initiative in Ottawa in March 1999. Its clients include Zurich Insurance, Jamieson Vitamins, Industry Canada, Minacs Group, Cashway Building Centres, and Canadian Facts Ltd.

The Prairies

The Prairies comprise the provinces of Manitoba, Saskatchewan and Alberta. This region's development was originally

based on its primary resources, including cereals and petroleum-to name the major ones-and on the construction of the national railway, which opened the way to interprovincial trade. The Prairies currently tend to invest more and more in the knowledge-based economy, in the information and communications technologies area. A good example of this effort to redirect the economy is Manitoba's innovation corridor, which hopes to eliminate the borders between the information technology sector and the traditional finance, education and health sectors in order to direct the various skills and resources in these sectors towards the knowledge-based economy.

New multimedia companies can base their development on the current and potential requirements of today's solid and diversified economy, particularly the aerospace, manufacturing, and fashion industries and the public health and education sector.

A recent survey of the multimedia industry in the province of Saskatchewan revealed how new the sector was: more than 90% of the companies surveyed had been in operation for less than 7 years, and 97% of them had not been part of the economy 10 years before. The same survey highlighted the undeniable dynamism of the industry, which experienced a 48% growth in the number of employees involved in multimedia production in only the previous 2 years.35

On the other hand, there are between 250 to 300, self declared, companies stating they are multimedia producers in the province of Alberta. That same survey, from PriceWaterhouseCoopers, estimates that the actual number of multimedia enterprises in that province may be around 300 to 400 companies. These companies generate between $250 to $500 millions CDN of revenue annually. There are approximately 3500 persons employed on a full time basis in the multimedia industry in Alberta.

The main growth market for the sector is the corporate services segment, and entrepreneurs are counting on the rapid spread of the Internet to gain access to the larger general public market. The design and development of content for the Internet constitutes the main activity among these developers. Interactive advertising and animation services have also been identified as particularly promising industry segments in this part of Canada.

The following multimedia companies operating in the Prairies have demonstrated their ingenuity and dynamism in the design of products and services meeting the needs of the highly demanding New Media industry.

Manitoba

Manlab Multimedia
Winnipeg
www.manlab.com

ManLab Multimedia provides a series of multimedia services, ranging from educational CD-ROMs to Web site design for companies. In April 1998, the company received a prestigious Macromedia award for its Web site and its interactive terminal, www.canadaplace.org.

Abject.com
Winnipeg
www.abject.com

Located in Winnipeg, Abject.com specializes in the development of multi-user applications for the interactive games and Internet services industries. Abject com is recognized for its design and development of one of the most impressive multi-player Internet games, The Stone, which is now played in more than 20 countries.

Kip Communications
Winnipeg

Kip Communications designs Web sites integrating advertising, entertainment and information. The company also develops sports portals integrating webcasting or web-TV.

Intrinsix
Winnipeg
www.intrinsix.ca

The National Post Business Magazine recognized Intrinsix as one of the top 250 Canadian companies in the high

technology field and as one of the top 25 companies doing Internet development in the area of corporate services. Intrinsix was the only Winnipeg company to be included on the list.

Saskatchewan

Gem Multimedia
Saskatoon
www.gem.sk.ca/

Gem specializes in the production of Internet sites that incorporate e-commerce solutions, multimedia presentations on CD-ROM and promotional interactive terminals.

Inroad Solutions
Saskatoon
www.inroad-solutions.com

Inroad Solutions produces educational and training CD-ROMs and online training for its clients. The Saskatchewan Tourism Office was one of its partners in the design of an online training program (Business Skills Development; BSD)

Alberta

BioWare Corp.
Edmonton
www.bioware.com

BioWare Corp produces interactive games for PCs. This new company has had enormous commercial success since it started in Edmonton in 1995. Shattered Steel, the first title it launched, sold more than 100,000 copies. More recently, Baldur's Gate was the most widely sold game in the United Kingdom, France and Germany. The game received the award for Role Playing Game of the Year on PC by the Academy of Interactive Arts and Sciences.

Vicom
Edmonton
www.vicom.ca

Vicom produces CD-ROM and online training for businesses. Its marketing partners include the powerful American company, Microsoft. It has received several awards in Canada and abroad.

Critical Fusion
Edmonton
www.criticalfusion.com

Critical Fusion provides training, education and communications services on CD-ROM, Internet and Intranets. Its clients include the University of Calgary and Alberta Learning - Learning Technologies Branch.

British Columbia

British Columbia, whose economy has traditionally been based on natural resource development, is gradually becoming a major Canadian player in the new technologies and multimedia area. This is illustrated by the fact that British Columbia's high technology sector has experienced a remarkable 30% growth rate over the past few years.

The film, television and information technologies industries, with their internationally recognized success, have been major contributors to the growth of the province's multimedia industry. The other factors that contributed to this growth included the presence of a $9 billion domestic entertainment market, a talented and skilled labour force employed by institutions recognized for the quality of their training and natural access to the major technology centres on the American west coast, Silicon Valley in particular. It should be noted that Vancouver also constitutes the preferred link between Canada and the impressive Asian market.

British Columbia is home to a dynamic and flourishing New Media industry. Between 300 and 500 companies are involved at various levels of the production chain. In 1998, industry revenues for the Vancouver area alone grew to $557 million.

The interactive games and animation segments play a major role in the growth and consolidation-still under way-of an industry positioned at the forefront of the digital industry.

- There are currently between 300 and 500 companies in British Columbia's multimedia industry
- Between 5,000 and 6,000 people are employed in British Columbia's multimedia industry
- 40% of companies employ fewer than 10 people and 20% employ more than 50 people
- 86% of the industry's employees are between 25 and 34 years of age
- 96 % of the industry's labour force has at least a technical college diploma and 70% has at least completed first level university
- 72 % of the industry's labour force earns an annual salary above $40,000
- 51 % of companies generated revenues of less than $500,000 and 7% of more than $10 million
- 40 % of companies generated more than half of their revenues through exports
- 65 % of companies have been in existence for less than 5 years

Sources: Pricewaterhouse Coopers 98 and 2000, IMPAC

The profile of Vancouver's multimedia cluster is as follows:

- 70 companies*
- 3,000 employees
- 50% of the companies expect to double their number of employees within the next two years
- 86% of the industry's employees are between 25 and 34 years of age
- 95 % of the workers in the cluster have post-secondary diplomas
- 78 % of the workers have annual salaries of at least $40,000
- The cluster is dominated by a few major international players: more than 50% of Vancouver's companies generate less than $500,000 annually, whereas 7% of the companies generate more than $10 million annually
- The most active segment is that of interactive games
- 30% annual growth
- Total sales of $557 million

* The Pricewaterhouse Coopers studies on British Columbia's multimedia industry seem to contain a contradiction: whereas the first study (NMBC 98) assessed revenues at $557 million and the number of companies at 70 for the Vancouver area, a second study (TNWS 00) provided the same figures for all of British Columbia. TNWS extrapolates revenues for the Vancouver cluster to $1 billion.

The following multimedia companies operating in British Columbia have demonstrated their ingenuity and dynamism in designing products and services meeting the needs of the highly demanding New Media industry.

British Columbia

Electronic Arts
Burnaby
www.electronicarts.com

Although American-owned, this company, which was the first in the world to publish interactive console games, should be mentioned. It is located in Burnaby, close to Vancouver, where the company built the largest multimedia complex in the world.

Ingenuity Works Inc.
Vancouver
www.ingenuityworks.com

Ingenuity Works is a Canadian company that has distinguished itself for more than 16 years in the area of fixed or Internet digital educational products. Its products, which have earned several prizes, are used in more than 30,000 North American schools. One of their most popular products is the online training portal called The Learning Window.

MainFrame Entertainment

Vancouver
www.mainframe.ca

Mainframe, a Canadian leader in 2D/3D animation, achieved outstanding success with its ReBoot series, an animated film for television. Mainframe, a recipient of several prizes in Canada and abroad, provides its clients the best animations available on the market. Its animations can be seen on YTV, ABC, the Cartoon Network, Fox Kids and Fox Family Channel.

Radical Entertainment
Vancouver
www.radical.ca

Radical Entertainment is the biggest Canadian-owned developer of games. The company produces interactive console and CD-ROM games for personal computers (PCs). Radical developed the following games: NBA Basketball 2000, NHL Championship 2000 for Fox Sports Interactive, MTV Snowboarding for THQ, and Jackie Chan's Stuntmaster for Midway.

Some Canadian companies by segment

This list presents the companies in the multimedia industry by segment as well as the main Canadian portals surveyed. This list does not claim to be exhaustive or to present the best companies in the industry. Based on the interviews conducted and the literature reviewed, these companies provide a good illustration of the current dynamism of the Canadian multimedia industry.

Entertainment and references:
Strategy First (Quebec) www.strategyfirst.com
Kutoka (Quebec) www.kutoka.com
I.C.E. Multimédia (Quebec) ice.multimedia@att.Canada.net
MicroForum (Ontario) www.microforum.com
ArcMedia (Ontario) www.arcmedia.com
Relic Entertainment (British Columbia) www.relic.com
DNA Media(British Columbia) www.dnamedia.com
Barking Dog Studios (British Columbia) www.barking-dog.com

Corporate applications:
NuRun (Quebec) www.nurun.com
ACME Multimédia (Quebec) www.acme-multimedia.com
Conceptis Technologies (Quebec) www.conceptis.com
Digital Renaissance (Ontario) www.digitalren.com
Cyberplex (Ontario) www.cyberplex.com
ICE (Ontario) www.iceinc.com
Burntsand Solutions (Manitoba) www.burntsand.ca
Interactive Advantage (Manitoba) www.ia.mb.ca
Vicom (Alberta) www.vicom.ca
TTG (Alberta) www.ttg-inc.com
Colombus Group (British Columbia) www.colombusgroup.com
Stratford Internet Technology (British Columbia) www.stratfordinternet.com
Blast Radius (British Columbia) www.blastradius.com<

Education and training:
MediaSpark IT Solutions (Nova Scotia)- www.mediaspark.com
Smart Force (New Brunswick)- www.smartforce.com
Tecsult Eduplus (Quebec)- www.eduplus.ca
BGW Multimédia (Quebec)- www.bgwmultimedia.com
Micro-Intel (Quebec)- www.micro-intel.com
Alias Wavefront. (Ontario)- www.aw.sgi.com
McGill Multimedia (Ontario)- www.mcgill.com
Tyndal Stone Media (Manitoba)- www.tyndal.com
Discoverware (Alberta)- www.discoverware.com
TAP Training & Consulting (British Columbia)- www.tap.ca
Arts Umbrella (British Columbia)- www.artsumbrella.com
Brainium (British Columbia) - www.brainium.com

Multimedia application producers:
Discreet Logic: visual animation applications - www.discreet.com
Softimage: visual animation applications - www.softimage.com
Matrox: electronic imagery - www.matrox.com
ATI: electronic imagery - www.ati.com
MGI software: electronic imagery - www.mgisoft.com
Credo Interactive: 3D visual animation - www.credointeractive.com
Toon Boom: 2D vectoral animation - www.toonboom.com

Main Canadian portals:
Sympatico (Bell) - www.sympatico.ca
InfiniT (Vidéotron) - www.infinit.com
Wave (Rogers) - www.wave.ca
Canoë - www.canoe.ca
La toile du Québec - www.toile.qc.ca

Canada

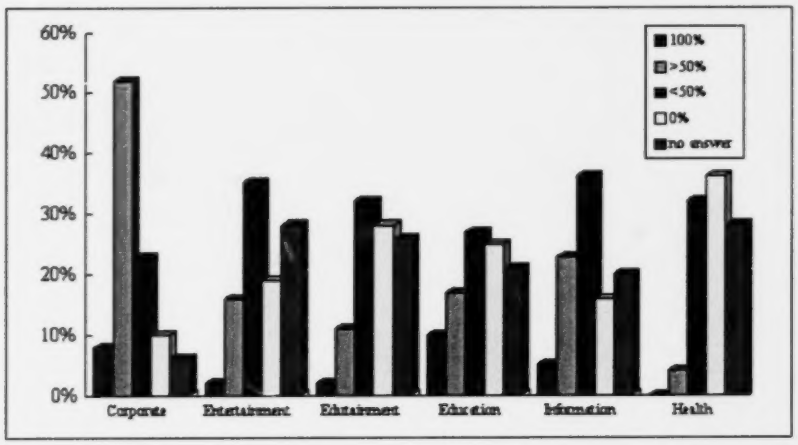
Updated: 2004-05-31

Industry Canada Industrie Canada

ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 5: The Multimedia Markets by Industry Segment

The segmentation of a developing industry, where the limits are not yet well defined, is not a small job. We will try to attempt it by drawing up a profile of the main markets occupied by Canadian multimedia entrepreneurs through the still evolving documentation on the multimedia industry segments. We will study the Internet multimedia market and the CD-ROM market, specifically for educational CD-ROMs and interactive console games for PCs and on the Internet. The Internet advertising market is also presented.

A survey conducted in 1997 on Ontario's multimedia companies showed the main segments occupied by these companies:



Source: Shauna Brail, 1997

The Internet multimedia market

In 1998, there were 43.2 million Internet sites, which represented a 45% increase over the previous year. These sites were generally designed according to the existing limits of the network. The implementation of high-speed Internet access services opened the door to a market for more elaborate sites and content. Only 3% of Internet users currently have high-speed access in the United States, or 778,000 subscribers out of 28.2 million connected residential users.36

It is estimated that there will be around 10 million high-speed users in 2002. (Dataquest estimates that by 2002, there will be 5.2 million modem-cable subscribers, while Strategis Group estimates that there will be 9.1 million (Milia 99)). While this is not a negligible number in absolute terms, it is but a drop in the bucket in terms of the 300 million people who will be connected in 2005.37

Internet use is closely related to a household's socio-economic status. According to Statistics Canada, the highest proportion of regular Internet users in 1998 was found in households with revenues in the top quartile (65%) and in which the head of the household had a university degree. This makes them difficult clients for companies operating in the Internet economy, particularly the multimedia companies.

A wide range of public and private initiatives are contributing to the emergence of New Media in Canada. For instance, the Community Access Program (provides public access to the Internet in urban and rural areas), the Computers for Schools Program and SchoolNet, have improved the opportunities for access in rural and public areas in Canada. Canadian teaching institutions are closely linked to the development of education and training programs that benefit from Canadian creative and technical skills.

Canadian New Media content designers are evolving in a highly diversified industry. The industry includes: the traditional media, which use the Internet to create new outlets for themselves; companies in various activity sectors, which want to use the Internet to promote their services; universities; libraries, and households. Thus, the production of Canadian New Media content can range from very simple texts and graphics to elaborate graphics and acoustic transmissions and streaming video. The majority of Canadian or other Internet content consists essentially of alphanumeric text. Even though the use of audio and video elements, singly or in combination, appears to be on the rise, the capacity to provide long-running programs of an acceptable technical quality is still taking hold slowly, especially where video is concerned.

Even if it only affects a limited number of Internet users and applications, the high-speed access market will have an impact on the traditional access market and on cultural industries. The television sector, where the operating context is starting to be disrupted by the onset of digital, runs the risk of being revolutionized as a result of the popularization of multimedia.

The Internet advertising market

Advertising on the Internet is a relatively new phenomenon and its tools, like its strategies, are evolving rapidly. Internet advertising can serve to stimulate consumer interest, to justify a purchase or to acquire data on potential and current clients.

At this time, the advertising form that is used on the Web is the advertising banner. New forms of Internet advertising will be appearing as soon as the bandwidth allows it and the use of the Internet becomes more widespread among the general public.

Revenues generated by the Internet advertising market are substantial. It is estimated that revenues from Internet advertising will exceed US$4 billion in the United States in 1999. Canadian revenues are also increasing, but they remain quite low for the time being. For that same year, the estimates were CAN$55 million, a 127% increase over 1997 revenues, which came to CAN$24.5 million. Revenues projected for 2000 are CAN$109 million. Canadian advertisers share the scepticism of Canadian sellers and consumers.38

The interactive games market

The interactive games market is broken down according to support, whether the game is online or on the Internet, interactive console games, and interactive
CD-ROM (or DVD) games for personal computers (PC). In 1998, the interactive games market represented 16 billion and an 18% increase in the market was projected for the first quarter of 1999. Furthermore, in the United States alone, more than 3.7 players were recorded in 1998, which was twice the number in the previous years, and this number was expected to grow to 30 million in 2001.39

Internet games

Games supporting multiple players over the Internet, which were obtained on CD-ROMs or by downloading, and those which appear only on the Internet accounted for US$128 billion in 1998 and should reach US$1.6 billion by 2001. The bandwidth is still a significant obstacle to the development of this segment for the general public. The speed of the Internet connection essentially determines the quality of the multimedia effects that will appear on the network.40

The Internet games phenomenon is at once significant (according to the IDSA, it affects almost one third of Internet users) and relatively recent since those who play online have been doing so for less than a year. Online games, therefore, remain an emerging sector but are already showing the first signs of the upheaval they will create in the games industry.

This market offers significant opportunities:

New market: Because of its unique features, the Internet is opening up a new market, operating under new rules and involving new players.

High-speed access: Online games may prove to be a deciding factor in the emergence of high-speed access on which access providers are focusing their future.

Occasional players: Online games are probably the fastest and least expensive way of reaching tens of millions of people who do not play games but who are prepared to dedicate a portion of their leisure time to connecting for occasional free entertainment.

New tools: Internet games will be relying on specific technologies which have not yet been invented. This represents an important opportunity, particularly for the developers of middleware tools.

Console games

The console games market represents 70% of the interactive games market. In 1998, 44.9 million American homes had a console (23.5 million of them had an 8 or 16 bit console and 21.4 million had one between 32 and 64 bits). Three impressive players dominate this market: Sega, Nintendo and Sony.

Sony

Sony is second in the world after Matsushita. Sony also produces semi conductors, LCDs, DVD players, batteries, cameras, MiniDisc systems, computers, high-resolution screens and telephones. Sony's holdings in the entertainment sector include: Columbia Tristar Motion Picture and the Columbia and Epic record labels. Sony's profits fell by 20% in 1998. The company confirmed that it had made a consolidated net profit of US$1.5 billion in the year ending March 31, 2000. The depreciation of the Yen and the economic situation in Asia caused a decrease in the company's profit margin despite an increase in PlayStation sales of close to 10% over the 21.6 million units sold during the 1998 fiscal year.

The implementation of PlayStation 2 should position Sony comfortably in first place in the interactive console games segment. PS2 will provide technical features that surpass those of the next generation of PCs.

300 MHZ / main CPU speed
32 MB RAM
32 GB / second Memory Bus Bandwidth
20 million fully structured polygon meshes per second
5.7 GB DVD-ROM

Sony has suggested that the PS2 will be four to five times faster than Intel's Pentium III microprocessor (Sony's graphics synthesizer operates with 6.2 billion floating points, compared with 2 billion for Intel).

Nintendo

With profits in the order of US$710 million and sales of more than US$4 billion for the fiscal year ending on March 31, 1999, Nintendo ranked second in the world in financial terms in 1998, behind Sony and ahead of Sega.

Nintendo announced that it will be possible to view DVD movies with its new console, Dolphin. Sony has not yet indicated whether it will be possible to watch DVD movies on the PS2. The Dolpin console qualifies as a serious contender for the next generation black box throne with its movie- and music-playing DVD player and Internet access, both of which come included.

Sega

Sega Entreprises is a subsidiary of CSK, the Japanese business giant. Led by the Japanese billionaire Isao Okawa, CSK is a conglomerate of the information sector, which comprises more than 45 companies. With assets in the order of US$1.5 billion, CSK recorded sales of US$6.25 billion during the 1998 fiscal year. The company expects to be in a position to reach annual revenues of US$8.3 billion by 2001.

The Most Popular Games:

Types of games %

Action games 31.0%
Racing games 17.1%
Sports games 16.6%
Shooter games 8.6%
Simulation games 1.7%
Other 1.0%

Some of the major players producing console games for one of the three interactive console games giants are found in

Canada: Behaviour, which has already produced Jersey Devil on its own (from the days of Megatoon) and, more recently, Looney Tunes: Lost in Time (Time/Warner's Bugs Bunny licence) for Infogrames and Ubisoft, which will be launching several titles for Nintendo (N64 and GameBoy) and PlayStation. Titles are also planned for Dreamcast (the new Sega console). Electronic Arts, the global giant in console and personal computer games design set up shop in British Columbia in October 1999.41

The CD-ROM market

According to the latest SIIA report, more than US$820 million were spent in the United States in 1997-98 on the purchase of software for elementary and secondary level students. Of this, $439 million were spent on instructional software. The North American recreational/educational CD-ROM market came to US$12 million in 1995 and US$582 million in 1998.42

Student/computer ratios in the US were 13.5/1 in 1997-98. In early 1999, this ratio was 9 at the primary level, 8 in junior high school and 7 in senior high school in Canada.43

The following three biggest American players occupy 79% of the Canadian market: The Learning Company (a subsidiary of Mattel, acquired through a US$3.8 billion transaction, TLC had acquired Mindscape in March 1998 and Broderbund in June; 25% of the global market), Havas (28 % of the American market; recently acquired Cendant for US$800 million) and Humangus. Disney ranks fourth.

The following table shows the number of CD-ROMs sold in Canada by segment.

CD-ROM Sales in Canada:

'A' Titles						
Segment	**96**	**97**	**98**	**99**	**00**	**01**
Games	7,000	10,000	15,000	17,000	19,000	21,000
Education	5,500	8,000	10,000	12,000	14,000	16,000
Reference	5,500	8,000	10,000	12,000	14,000	16,000
'AA' Titles						
Segment	**96**	**97**	**98**	**99**	**00**	**01**
Games	18,000	25,000	36,000	44,000	50,000	55,000
Education	11,000	15,000	17,000	19,000	22,000	24,000
Reference	7,000	10,000	12,000	14,000	16,000	18,000

Source: IDG 99

Canada

Updated: 2004-05-31

Industry Canada Industrie Canada

ARCHIVES - Profile of the Canadian Multimedia Industry - Chapter 6: Foreign multimedia markets

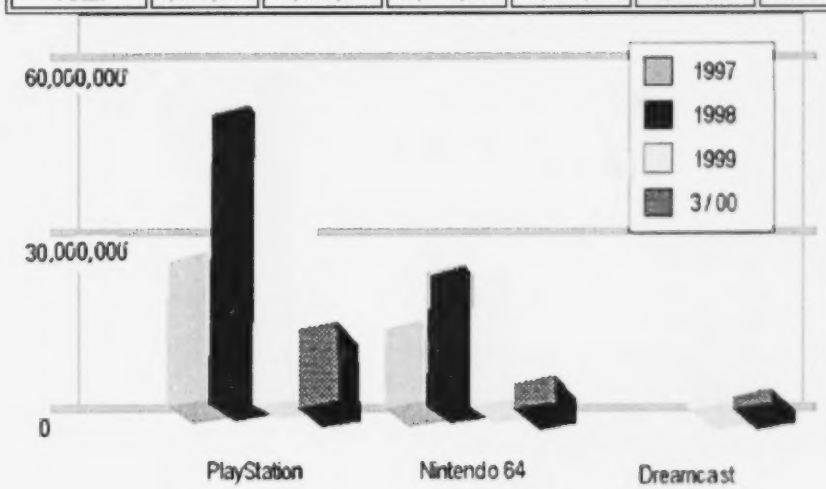
The Canadian market is too small to enable Multimedia producers to match the fierce competition launched by companies from all parts of the world. There are many potential markets outside of Canada. We will attempt to briefly outline the main markets, based on their business potential and their appeal to Canadian producers. The US market will be described first, followed by the European and Asian markets. For the latter, we will limit ourselves to a brief description of the markets in Singapore and Japan, given the lack of documentation on this subject.

The annual growth rate of the entire American multimedia market should be around 35% and the value of this market should reach US$22 billion in 2000. The most important part of this industry in terms of growth is the general public segment, but companies are expected to increase their use of multimedia, so they will make up a larger part of the market. According to sector analysts, multimedia product sales to the industry will reach up to 40% of the total. The factor that will determine this growth is the progression in demand in the engineering, advertising, training, sales and marketing, and communications sectors in companies.44

The American console games market is in full bloom. The three main players, Nintendo, Sega and Sony, respectively, sold 570 000 Nintendo 64 consoles, 859 000 PlayStation consoles and 178 800 Dreamcast consoles in the first quarter of 2000. Sales of interactive games for these consoles remain high: 14.3 million PlayStation games, 6.1 million cartridges for Nintendo games and 1.7 million cartridges for Sega's Dreamcast console have reached the public.45

PlayStation, Nintendo 64 and Dreamcast Units Sold in the period of 1995-2000

	1995	1996	1997	1998	1999	2000
Playstation	1,679,200	10,315,000	28,881,000	54,118,200	6,300,000	14,374,000
Nintendo 64	-	3,024,000	14,959,800	25,817,400	26,000,000	6,118,081
Dreamcast	-	-	-	-	3,967,000	1,707,100
Total	1,679,200	13,339,000	43,840,800	79,935,600	92,967,000	22,199,181



Source: IDG 1999

The educational CD-ROM market is shrinking. Whereas 5.8 million units were recorded as sold in the first quarter of 2000, 6.6 million units were sold during that same period in 1999, which represents a 13% drop in sales.

The entertainment CD-ROM market is also doing well: in the first five months of 2000, more than 22.6 million units were sold for US$487 million.

Retail Sales - March 1999 and March 2000

	Dollar Sales ($000)		Unit Sales	
	Q1 1999	Q1 2000	Q1 1999	Q1 2000
Entertainment	306,697	318,804	13,425	14,817
Education	135,755	117,709	6,606	5,766
Total	442,452	436,513	20,031	20,583

Source: IDG 1999

The U.S. Midwest

The U.S. Midwest is a relatively untapped market for multimedia companies. In the future, technologies such as hybrid CD-ROMs, DVD-ROMs, the virtual environment and increased use of the Internet will become more and more important in manufacturing. Technological constraints are based on limitations in terms of bandwidth and DVD-ROM standards.

There are opportunities in all sectors of the market, but the most interesting ones will be found in the applications for sales and marketing and in the use of the Internet and Intranet. These segments require more creativity than the current uses for engineering and training. Canadian multimedia companies will be able to apply their animation skills to the areas of greatest need: software development and design.

The area covered by the states of Indiana, Kentucky, Michigan and Ohio is the manufacturing centre of the United States, especially in terms of automobile manufacturing (60% of American automobile manufacturing). These states also hold first place nation-wide in the manufacturing of steel, wrought iron, rubber and plastic. However, not a single large multimedia company has established its headquarters in this region.

As is the case with numerous developing sectors, the multimedia one is still seeking its balance. The market is particularly poorly defined in the Midwest, where the use of multimedia has not been quick to follow the example set by the entertainment and publishing sectors. Indiana is in first place nation-wide in CD-ROM production, but the state does not have a strong base of multimedia product developers. The situation is the same in Kentucky, Michigan and Ohio. None of the main multimedia product companies has its headquarters in any of these four states. The main developers and suppliers of multimedia products tend to concentrate along the coasts since their growth has evolved hand in hand with the industry's. This situation suggests the existence of relatively untapped opportunities for the development of multimedia alliances in the Midwest.

There are opportunities for multimedia product companies in all of the manufacturing sectors in Indiana, Kentucky, Michigan and Ohio. In the Midwest, the multimedia market is relatively unexploited, but it seems to be the new frontier for some applications in this area. The 35% annual growth projected for the multimedia products market should create opportunities in the whole region covered by these four states. Michigan has better opportunities than the other three states because of the major automobile manufacturing and advertising companies that are present there.46

New York State

New York State is an interesting place to do business, especially since changes were made to its economic policy. Major reforms such as tax cuts, the elimination of regulatory barriers and modifications to State programs that were not yielding the desired results have greatly improved the business environment. New York State has a GDP of US$593 billion, which is around 8% of the GDP of the United States.

With a population of 7.3 million, New York is the most densely populated city in the United States. It is divided into five boroughs - Brooklyn, Queens, Manhattan, the Bronx and Staten Island. The population is well educated, with 25% of inhabitants having at least a college diploma.

Number of companies by area

Area	Number of Companies

Manhatten	2,128
Other burroughs of New York	473
Metropolitan New York	696
New Jersey	974
Conneticut	610

Source: Team Canada's Market Research Centre - August 2000

New York State can boast the existence of local skills in various sectors of the multimedia industry, such as artists and writers, business owners and strategic partners. Local companies also have access to a vast pool of consumers and other industry participants. However, these states are lacking software and programming specialists and an adequate technical infrastructure, and it is still expensive to do business there (despite recent improvements in the tax structure).

The multimedia industry in New York State is experiencing rapid growth and it should become one of the key industrial sectors in the XXI century. The size of this industry doubled between 1995 and 1997, and its value increased from US$2.85 billion to US$5.7 billion. This growth is attributed to an increase in the size of the client base, in terms of both households and companies, where the demand for more sophisticated products and services remains steady.47

The Internet is one of the sectors experiencing the strongest multimedia growth. The multiplication in the number of residential and industrial subscribers has led to an increase in sales in online games as well as to the proliferation of e-commerce services.

In 1999, New York's New Media industry generated gross revenues of US$16.8 billion, a 53% annual increase since mid-1997.48

Opportunities: Online games and e-commerce

The more sustained rate of data transfer has contributed to a significant growth in the online games industry throughout the United States. According to Frost and Sullivan, U.S. sales generated by the creation of online game software reached around US$25.9 million in 1997, which is a 136.7% increase over 1996. Games publishers and analysts point out that the sale of games that can be played on the Internet is surpassing the sale of CD-ROM versions by 20%. Forrester Research estimates that sites such as Playsite and Sony Station, which provide online games, will dominate the market in 1999 and that the revenues generated by online games will increase from US$540 million in 1999 to US$1.6 billion in 2001.

Sales and Advertising Revenues of Sites Providing Online Games

Area	Subscription Fees	Advertising Revenues
1999	$41,000,000	$65,000,000
2000E	$98,000,000	$113,000,000
2001E	$161,000,000	$185,000,000
2002E	$263,000,000	$282,000,000
2003E	$360,000,000	$409,000,000

E-commerce, networking and institutional communications remain the main sectors with the most interesting new opportunities in New York. A very large number of companies have set up their head offices in New York, where the main banks, brokerage firms, advertising agencies, and the big publishers and television and cable television networks are to be found. There are opportunities to be exploited as a result of the development of technologies enabling these companies to transfer more of their commercial transactions onto the Web. Although it may be difficult to pinpoint the most promising sub-sectors in this constantly changing market, the best placed companies are those that can provide the following goods and services: Intranet/Extranet, sites from which databases can be activated, intelligent agents, data compression technologies and other technologies designed to improve Web site functionality.

Among the companies controlled by foreign interests in this city, 13.8% are Canadian, and Canada holds third place among the largest foreign investors in New York. Furthermore, Canada has preferential access to the American market because of the North American Free Trade Agreement (NAFTA). Canadian companies can compete with American companies for public markets, and the goods and services that are exported from Canada to the United States are covered

by low if not nonexistent customs duties.49

The Northwest region, the Pacific region

The area including Alaska, Idaho, Oregon and the State of Washington has state of the art universities and private companies that regularly put out advanced technologies. Even more importantly, numerous companies in the area are actively seeking to form strategic alliances for the development of new technologies. These strategic alliances include the granting of licences on technologies by companies as well as the integration of such licences in companies. The Northwest area has a wealth of technology transfer opportunities.

The Pacific Northwest region is a leader in the initiation, development and manufacturing of technology-based products. Companies and organizations such as ATL Ultrasound, Boeing, the Fred Hutchinson Cancer Research Centre, Immunex, Microsoft, Tektronix, Weyerhaeuser and many others were founded in this region, where research universities, federal laboratories and non-profit research laboratories are the main beneficiaries of American federal research subsidies and are leaders in the research and development of new and innovative technological products and services.50

The European market

The Scandinavian countries
(Denmark, Finland, Norway and Sweden)

There are many reasons why a Canadian multimedia producer would be attracted to the northern European market. First, the multimedia sector is treated as a high priority issue by all of the governments in this area. Furthermore, Internet penetration is one of the highest in the world. Also, the Scandinavian region has 25 million consumers and a combined gross domestic product of some $727 billion. It is not by chance that this part of Europe has the strongest rate of growth in exports from Canada compared with the other parts of Europe. Over the years, a certain chemistry has evolved in business relations between local companies and Canadian companies doing business there. It should also be noted that English is commonly used in business. Finally, the Scandinavian region constitutes an excellent platform for developing a stronger penetration into the rest of the European market.

Various opportunities exist for Canadian entrepreneurs wishing to do business in this part of the world. First, we should point out the rapid proliferation in cable modems and high-speed ASDL transmissions. Furthermore, the high quality of original Canadian content is recognized in these countries and the business community in this region shares an interest in this respect. Finally, local entrepreneurs have a very open attitude to opportunities for strategic alliances in the multimedia field.

Germany

With more than 82 million inhabitants, Germany is the largest European country from a demographic point of view. Furthermore, Germany is the third economic power worldwide, with a GDP of DM3.877 billion. The German economy is on the way to becoming the most powerful digital economy in Europe. At this point, American companies hold the top position in the multimedia economy, which may be a reason for Canadian companies to be interested in this market. The cities where multimedia companies have the strongest presence are Berlin, Cologne, Munich and Hamburg.

There are some interesting multimedia opportunities coming up in Germany. The Germans are generally very good consumers of North American content. Electronic infrastructures provide opportunities for ready positioning of multimedia content. The potential for development in this service area is enormous, and Canadian entrepreneurs will be able to tap into new opportunities when they join up with a local firm. Finally, the creativity and innovation are highly encouraged and sought-after characteristics.

The United Kingdom

The United Kingdom is a potential market of 60 million consumers and Canada's largest European market. Canada is the fourth largest investor in the country. At the same time, the United Kingdom is the second largest investor in Canada. This is largely due to the close ties uniting the two countries in terms of language, culture and economic and legal environments.

The multimedia sector in the United Kingdom is expanding strongly, particularly because of the increased penetration of personal computers and the Internet in European homes. The growth in the personal computer market and in the Internet is slightly higher in the United Kingdom than in the rest of Europe. This may in part be due to the use of English as the common language. Furthermore, the multimedia sector in the United Kingdom is demonstrating high productivity levels of

around CAN$75 000 per employee. The multimedia sector in this country is mainly focused on services. Closely associated with the visual arts sector, the multimedia sector benefits greatly from the highly influential film and television industries.52

It is relatively simple for foreign investors to get into the market, which is an essential consideration. Furthermore, over 30% of the world's interactive games industry is located in the United Kingdom, with a value of $2.4 billion in 1999. The penetration of interactive television is especially high there, which makes the United Kingdom a very desirable location for interactive television content developers. The wireless applications market is also growing at full speed in this country.

France

France has experienced strong economic growth since 1998, with a 3.2% increase in its GDP. It is estimated that in 1999 GDP will be around 2.4% and that it will increase by another 3% in 2000. Despite a persistent unemployment rate of 11.1%, consumer and business confidence has remained relatively strong as a result of low inflation and interest rates.

French consumers are expected to increase their expenditures on personal computers (PCs) and software. Around 33% of French households have personal computers and almost 11.5% have access to the Internet. In 1998, PC sales increased by 22%, the second largest in Europe.

The growing popularity of the Internet and of transactions done over the Web has created new opportunities for Canadian multimedia exporters who want to penetrate the French market. Around 850,000 Internet subscribers were recorded in 1997. Current estimates indicate that 2 million French households and 2.5 million companies should be connected by 2001. French companies are especially interested in interactive business training programs that can be accessed through Intranets.

The growing use of the Internet has also sparked interest in e-commerce. In 1997, there were FF700 million (around CAN$175 million) worth of e-commerce transactions. The number of e-commerce sites also keeps growing, which has important repercussions for retail sales and B2B and B2C sales, as business sales relying on these technologies are expected to increase over the coming years. There are significant opportunities for software, service and equipment imports.

More than 9.5 million educational CD-ROMs and games for PCs, with an estimated value of FF2.5 million (around CAN$600 million) were sold in France in 1998. These sales were distributed as follows:

Games 51%
Education 18%
Arts and culture 14%
Practical programs 17%

Educational multimedia is one of the segments of the French multimedia market that has seen the most rapid growth. In the first quarter of 1999, educational CD-ROM sales grew by 40% compared with the sales made in the same period in the previous year. Educational products now represent 25% of CD-ROM sales in France. In 1998, 1.86 million educational CD-ROMs were sold, a 94% increase over 1997.

Console games are also popular among French consumers. More than 26% of French households have a game console. In 1998, 8.5 million games were sold for a total of FF2 billion (around C$500 million). France represents almost 25% of the European market for console games. The French games market is dominated by Sony, with its PlayStation console. In the first quarter of 1999, more than 70% of total game and console sales involved PlayStation brands. GameBoy took 15% of the market and Nintendo 12%.

The growing popularity of the Internet has also created some interesting opportunities for Canadian companies operating in the e-commerce segment. Although only 15% of Internet users in France had made an online purchase, Internet transactions reached FF700 million in 1997 (around C$175 million). The total e-commerce market should reach C$15 billion by 2001.

Relatively few computer equipment manufacturers are active in the French market. However, the expertise of Canadian software manufacturers is well known. There are more than 100 Canadian software programs among the 12 500 products listed in the CXP software bank catalogue. CXP is a French association that provides its members with a complete range of services for software assessment and selection. The following Canadian software and telecommunications companies are established in France: Nortel Networks, Newbridge, Mitel, Corel, Matrox, Téléglobe, Discreet Logic, i4i and Proxima.53

The Asian market

Singapore

Although only a small city-state of 3.5 million inhabitants, Singapore is still very prosperous, largely because of its international trade. This orientation towards trade is a result of two factors: Singapore's geographic location, which is near one of the busiest seaways in the world, and the government's export-focused economic strategy. These two factors have greatly contributed to making Singapore one of the most active ports in the world and the hub and spoke of trade and distribution in South East Asia.

In many respects, Singapore is the most advanced country in the region from an industrial point of view, which makes it an attractive location for foreign companies. The country also provides a significant local market.

The demand for multimedia products and services has grown strong as a result of government-backed projects designed to turn the city-state into an "intelligent island". Although local designers who use the latest technology are generating significant competition in this area, demand still exists for foreign participation. The Singapore ONE project, the Internet and improvements in the educational infrastructure are but a few of the areas offering major opportunities to Canadian companies.

The Singapore ONE project is one of the first instances of wide-band multimedia networks and applications in the world. It is also one of the first projects in the world to provide high-speed interactive multimedia applications and services on the network, not only to advanced users but throughout the island.

Besides the expectation of increased demand for multimedia products, there are other factors enhancing the appeal of Singapore's multimedia market: an excellent infrastructure (the large bandwidth should be available to all of the city state's citizens by 2002), per inhabitant income greater than US$26 000, close trade links with neighbouring countries, solid local and regional business networks, numerous examples of successful strategic alliances and joint ventures, an evolved computer environment, clients using high tech applications, and widespread penetration of the network.

Through organizations such as the National Computer Board and the National Science and Technology Board, the government of Singapore has been working to attract foreign companies and provide financial and other benefits to promote multimedia development.54

Japan

Despite the depressed Japanese economy, some experts remain convinced that this country still provides one of the best opportunities for information technologies in the world and that it provides significant opportunities to exporters. Everything suggests that the demand for personal computers, software, multimedia products and Internet or external network related multimedia software programs will remain strong.

In 1997, multimedia product sales came to around 4.3 billion yen (US$33.8 billion), a 5% increase over the previous year. The multimedia software market grew by 17% from 1996 to 1997, from US$3.5 billion to US$4.1 billion.

Total imports came to US$2.4 billion in 1997, which was 60% of the global software market, and a 52% increase over 1996. Experts project that the market will grow at an annual rate of 35% between 1998 and 2000 and that the strongest growth will be in Internet related software and products. 55

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Strategic Alliances

According to several analysts, there is no doubt that there will be more and more mergers of relatively small companies in the future in order to create more powerful and solid companies. SME owners and executives are highly dependent on networking for obtaining business information. Such impromptu networking often leads to the creation of unofficial alliances. A multimedia solution often requires co-operation between telecommunications service providers, computer specialists and content designers. Another form of partnership favored by young multimedia companies involves becoming associated with large well-established companies for strategic purposes.

Official alliances are often forged in universities, major telecommunications companies and broadcasting corporations. In exchange for their products, multimedia companies receive funding, Internet access and, in the case of broadcasting corporations, content and distribution channels. For various reasons, alliances most frequently occur between companies. The main reason is that they focus on immediate opportunities for optimal return on investment. For the developers of mass-market products, return on investment takes longer and is less certain. The developers of business products have a more sophisticated management structure than that of mass market producers. This structure often enables the transfer of management resources to the creation and maintenance of these alliances.

Strategic associations are often required in order to avoid falling behind in the industry's latest technology. Alliances generally focus on specific short-term projects rather than long-term partnerships. Several alliances also focus on the distribution of multimedia products and services abroad in view of the relatively small Canadian market.

Distribution and Marketing

New Media distribution falls into two categories: physical distribution (CD-ROM and DVD) and electronic distribution (Internet, Extant, Intranet, interactive television, etc.). Physical distribution is a highly consolidated sector. A few players share the small Canadian market. On the other hand, the electronic distribution network contains few, if any, barriers to entry. The only bottlenecks that occur are in terms of portal sites, which are essentially the access gates to multimedia applications and services.

Given that the number of titles available on the market is constantly increasing, distribution presents somewhat of a problem. It is practically impossible for Canadian entrepreneurs in the industry to set up distribution channels since the big American companies have reserved spots.

A majority of entrepreneurs taking part in a qualitative study into the challenges facing the Canadian multimedia industry indicated that the Internet represented the future of multimedia distribution. One of the participants even indicated that "the Internet had unlimited shelf space". Most participants agreed that the distribution channels and models were growing strongly. Some even indicated that they had created their own distribution channels by advertising in magazines, calling for direct marketing and through non-traditional points of sale instead of media sales locations (for instance, distributing a title of cooking recipes through a food store rather than through a retailer of multimedia products).

Ongoing efforts to secure appropriate distribution channels through networking are common to all entrepreneurs in the industry. However, there appear to be some differences in terms of distribution and marketing between industry sectors. The developers of titles for the mass market see distribution as their main challenge. The developers of business products, on the other hand, are more likely to be absorbed with by the requirements of a particular client whose distribution requirements are limited, if not nonexistent.

The convergence of television and the Internet

[Translation]

> "Companies surveying Internet users all agree: with each passing month, people are surfing longer.

> According to Media Metrix, the 12 million Canadian Internet users spent 100 million hours surfing last month (June 00). Other survey firms even maintain that youth between 12 and 17 years of age now spend about as much time surfing as watching TV. This means that television broadcasters are losing an important part of the market. In order to regain the lost audiences, television stations are turning to the Internet to market their content, which they can do through the high performance connections."

The Internet is expected to revolutionize television just as the latter revolutionized the other media. Television and radio networks are now appearing on the Internet and competing with the televised networks. Television programs that are broadcast at the other side of the world can also be accessed through the Internet. Consumers, especially the younger generations, are spending more and more time on the Internet, generally to the detriment of television.

The trend towards spending less time watching TV and more time surfing the Internet has been confirmed by most studies on the subject. One such A study, conducted by Nielsen/AOL in 1998, showed that AOL subscribers spend 6% less time in front of their television sets. A study by Pricewaterhouse Coopers in October of the same year indicated that 34% of Internet users watched less TV. This drop in the television audience represented 33 million hours per month in the United States.

In a world characterized by a multiplicity of channels, the role of television networks will have to be re-examined. The "TV viewer-cybernaut" might prefer to watch his or her favourite programs at the time of his or her choice rather than submit to a broadcaster's schedule.

The convergence market is built on two distinct markets, digital television and Internet television, which are expected to gradually merge into one.

It is difficult to provide a real overview of the state of the digital television market. There are discrepancies in the available data, sometimes by a factor of two. Nonetheless, according to Médiamétrie, there were 23 million digital television subscribers by late 1998. The penetration rate of digital television does not appear to be more than 5% in Canada.57

This is a relatively new phenomenon, but the trend that was observed two years ago is being confirmed: more and more people watch TV and surf the Internet at the same time. The number of telenauts has more than tripled in a year. There were 8 million of them in 1998. Today, 27 million of them are juggling the two technologies.58

The major television broadcasters are capitalizing on their audiences in order to build their Internet portfolios, thus trading airtime for shares in the company. In Canada, this is the case with CBS.com, which appears in the capital of MVP.com, Bigcharts, CBS Market Watch, CBS Sportsline, sports.com, Office.com, Jobs.com, etc. Le Groupe Vidéotron and TVA are also applying this logic in Quebec through the buy-back of Netgraphe. Through successive takeovers and groupings, Le Groupe Vidéotron-TVA holds 54% of one of the main Quebec Internet empires (Infinit, Joboom, la Toile du Québec, La Presse, Multimédium, Compagnie.com, Économédia, Mégagiciel, Musimax, Trustar, TVA, Musique Plus, etc.)

The webcasting market comprises two components:

- Streaming, which directly corresponds to TV. It involves the real-time broadcasting of video and audio over the network; and
- Video on demand, which enables Internet users to consult video documents whenever they want. The principle is similar to that of the video club.

Several factors point to the growth of this phenomenon. It has been announced that webcasting should generate $4.5 billion in sales this year, at a time when 30 million Americans are already turning to consulting sites providing content through streaming, in particular on the 700 streaming audio-visual sites. The webcast audience is growing by 100% every 4 months. In May 2000, 3,198 radio stations and 214 television stations were already transmitting their signals by webcast. More than 400,000 Web pages integrate webcasting, which. could reach 45 million telenauts in all of its forms.59

Two Canadian webcasting projects

TVRadio.com is a new Canadian (Toronto) portal that has 17 specialty channels (and is preparing another 20) that will provide short duration niche-content. The selected themes include astrology, romance, comedy, gastronomy, business and film. Chat rooms are also being proposed. Two broadcasting formats are planned: Quick Time and Media Player.

The Réseau Petite-Nation (Quebec) is testing opportunities for using the Internet as a means of maintaining televisual activity in this part of the Outaouais, which recently closed its doors. Still at the technical testing stage, this project should

provide an opportunity to ensure continuous news and various online and offline reporting. This example is proof that the Internet could eventually take on specialty station projects that cannot find traditional distribution channels.

High-speed connections are necessary if webcasting is to compete with traditional television in terms of quality. Yet, out of the 2.7 million modem cables installed in North America, one-fifth are in Canada. With 560,000 machines in circulation, this country is way ahead of the other industrialized countries, with the exception of the United States. The main Canadian high-speed connection supplier is Rogers-Shaw, with more than 200,000 subscribers. Vidéotron has 66,000 subscribers for the same service. The company has just ordered 50,000 additional machines.60

The Canadian Industry - Facing the Trend

All informed analysts agree that the multimedia industry has enormous development potential. The global intensification of penetration by "the" interactive media, the Internet, has opened the door to a huge readily-accessible consumer market and to continuously falling prices. The convergence of media and industries also entails expectations of strong original, multicultural and multilingual content, which would flow from the creativity of developers and the ingenuity of entrepreneurs. The almost exponential growth of e-commerce will enable more and more companies to progressively abandon the traditional marketing channels and to turn to electronic transactions and to tomorrow's marketing network,the Internet.

The Canadian industry is once again faced with an impressive array of challenges and opportunities. It is well equipped to set itself apart from its competitors and to enable the Canadian community to gain from its advances. Canadian communications infrastructures are of a high standard and are spread across the country. The penetration rates for computers and the Internet are among the highest in the world.

Canada enjoys quite a strong local market, which provides opportunities for the emergence of innovative and visionary companies. Canada's population is one of the most highly educated in the world, and the public and private educational networks are developed in all regions of the country, while specialized multimedia training is provided to Canadians in all provinces. A major issue for the development of the Canadian multimedia market remains the penetration of high-speed access: this is an essential component if the quality of distribution of multimedia products is to be equivalent to television's , from the data transfer standpoint.

Access to the major economic markets constitutes an undeniable advantage for Canadian industries. Canada enjoys direct access to the largest multimedia market at this point in time, the United States, and has established trade connections with the East and the West, which provides effective and reasonably priced access to the European and Asian markets. Once these markets have established high-speed connections, electronic distribution will enable Canadian companies to provide their products and services directly in all of the foreign markets.

The development of the Canadian multimedia market is also a result of the ability of its entrepreneurs to develop original and high quality content. Several Canadian companies have demonstrated beyond any doubt the industry's creativity and drive in designing original content. But there is more involved in the development of a multimedia product if it is to be sold on a large scale (product marketing), and this is an area in which the industry is still quite weak. Training programs in product marketing and government assistance for marketing and strategic alliances are the key solutions to correcting this weakness. Furthermore, the distribution of Canadian multimedia products, given the still relatively low penetration of the Internet and the low level of high-speed penetration, is a major obstacle to the development of many Canadian companies. Since American players largely dominate the distribution market, the inclusion of Canadian products on retailers' shelves is not assured. Inter-company networking and distribution alliances are currently ways of circumventing this difficulty.

Finally, the television and Internet convergence market will continue to grow and the Canadian industry will have to secure its place in it. As indicated above, Canadian webcasting projects are now seeing the light of day. The digital television market is continuing to grow and several Canadian developers are starting to position themselves in this market.

Due to their recognized expertise and the creativity of their developers, several Canadian companies are currently at the forefront of the animation market, which includes special effects in film animation. Many of them have home addresses in the Montreal, Toronto and Vancouver multimedia clusters.

The three major Canadian multimedia centres are the main entries for foreign investment in this area. Additional effort will no doubt be called for if potential investors are to become more familiar with the strengths and successes residing in these clusters. As well, the original expertise being developed by producers in the Prairies and Atlantic Canada would benefit from large-scale advertising, which would ensure that the whole country gains from the potential economic benefits resulting from the worldwide growth of multimedia.

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Consortium multimédia Césam : http://www.cesam.qc.ca/
Centre de recherche information de Montréal : http://www.crim.ca/
Forum des inforoutes et du multimédia : http://www.fim.org
Inter LogiQ Network (formerly CPLQ) : http://www.interlogiq.ca
Le marché international du multimédia : http://www.mim.qc.ca

Atlantique :
Atlantic Digital Media Festival :http://www.baddeckfest.com
Newfoundland and Labrador Association of Technology Industries : http://www.nati.net
Information Technology Association of Prince Edward Island : http://www.itap.pe.ca

Ontario :
Interactive Multimedia Arts & Technologies Association http://www.imat.ca/
Smart Toronto : http://www.sto.org
Totonto New Media Works : http://www.tnmw.on.ca

Ouest canadien :
Alberta New Media Association : http://www.albertanewmedia.com/
Edmonton New Media : http://www.enmi.ab.ca
Saskatchewan New Media Association : http://www.snmda.sk.ca
British Columbia Technology Industries Association : http://www.bctia.org
New Media BC : http://www.newmediabc.com

Divers :
Internet Indicators : http://www.internetindicator.com
Electronic Entertainment Expo : http:///www.e3expo.com
Milia, événement annuel sur le multimédia, à Cannes :http://www.milia.com
Cableexpo : http://www.ccta.ca
Goupe Multimediator : http://www.multimediator.com/

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Canada

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ARCHIVES - Profile of the Canadian Multimedia Industry - Training Institutions

List of Training Institutions providing Multimedia Training Programs in Canada

Alberta College of Art & Design (Calgary, Alberta)
Tel: (800) 251-8290 / (403) 284-7634

Algonquin College (Ottawa, Ontario)
Tel: (800) 565-4723 / (613) 727-4723
E-mail: information@algonquin.on.ca

Applied Multimedia Training Center (Calgary, Alberta)
Tel: (800) 717-4112 / (403) 571-4700 / Fax (403)571-4709
E-mail: info@applied-multimedia.com

Applied Multimedia Training Center (Winnipeg, Manitoba)
Tel: (204) 772-4411 / Fax (204) 772-2896
E-mail: amtc_wpg@pangea.ca

Banff New Media Institute (Banff, Alberta)
Tel (800) 565-9989 / Fax (403) 762-6345
E-mail: arts_info@banffcentre.ab.ca

Bell Centre for Creative Communications (Toronto, Ontario)
Tel: (416) 289-5100
E-mail: nateh@bccc.com

BKM Research and Development (Dieppe, New Brunswick)
Tel: (506) 857-9620 / Fax: (506) 852-3728
E-mail: courses@bkm.ca

Bodwell Internet School (Vancouver, British Columbia)
Tel: (604) 602-7600 / Fax: (604) 602-7699
E-mail: info@inetschool.com

Business and Technology Training Institute (Fredericton, New Brunswick)
Tel: (506) 450-4400
E-mail: multimedia@btti.com

Canadian Film Centre - MediaLinx h@bitat (Toronto, Ontario)
Tel: (416) 449-9151 / Fax: (416) 445-9481
E-mail: pkoidis@cdnfilmcentre.com

Canadian Screen Training Centre (Ottawa, Ontario)
Tel: (800) 742-6016 / (613) 789-4720
E-mail: information@canscreen.ca

Canadore College (North Bay, Ontario)
Tel: (705) 474-7600 / Fax: (705) 474-2384
E-mail: helpdesk@cdrive.canadore.on.ca

Capilano College (Vancouver, British Columbia)
Tel: (604) 986-1911
E-mail: registration@capcollege.bc.ca

C.B.S. Interactive Multimedia Training Centre (various Canadian locations)
Tel: (416) 961-9394
E-mail: learn@cbstraining.com

Centennial College (Toronto, Ontario)
Tel: (416) 289-5000
E-mail: calreq@lmail.cencol.on.ca

Center for Digital Imaging and Sound (CDIS) (Burnaby, British Columbia)
Tel: (800) 661-1885 / (604) 298-5400 / Fax: (604) 298-5403
E-mail: info@artschool.com

Centre for Internet & Multimedia Development International (Toronto, Ontario)
Tel: (416) 863-0839 / Fax: (416) 863-0648
E-mail: webmaster@cimdi.com

CINAC Inc. (Montreal, Quebec)
Tel: (514) 737-5537 / Fax: (514) 737-2560
E-mail: infofr@cinac.com

Computeach College Inc. (Mississauga, Ontario)
Tel: (905) 670-9550 / Fax: (905) 670-5856
E-mail: registrar@computeach.net

Computer Master Training Center (Victoria, British Columbia)
Tel: (888) 391-1750 / (250) 380-9850 / Fax: (250) 380-9852
E-mail: info@computermaster.com

Computer Training Institute (St John, New Brunswick)
Tel: (506) 632-1604
E-mail: cti@fundy.net

Confederation College (Thunder Bay, Ontario)
Tel: (807) 475-6110
E-mail: schroede@confederationc.on.ca

CVM International (Toronto, Ontario)
Tel: (416) 977-9745 / Fax: (416) 977-4441
E-mail: sales@cvmint.com

Delcom International (Ottawa, Ontario)
Tel: (613) 230-3815 / Fax: (613) 230-3221
E-mail: admin@delcom.ca

DevStudios E-media & Design Multimedia Program
For more information go to http://www.devstudios.com/emedia.asp?education=1

DigiPen Applied Computer Graphics School (Vancouver, British Columbia)
Tel: (604) 682-0300
E-mail: programming@digipen.com

Digital Media Studios (Toronto, Ontario)
Tel: (416) 977-6732 / Fax: (416) 977-0766
E-mail: dms@h-plus-a.com

Digital Media Learning Centre (Ottawa, Ontario)
Tel: (877) 313-6261 / (613) 228-3153
E-mail: dcross@dcross.com

DirectED (Sydney, Nova Scotia)

Tel: (888) 464-7822
E-mail: info@directed.edu

Durham Business and Computer College (Pickering, Ontario)
Tel: (905) 427-3010
E-mail: geninfo@staff.dbcc.on.ca

Durham College (Oshawa, Ontario)
Tel: (905) 721-2000 / Fax: (905) 721-3201
E-mail: info@durham.durhamc.on.ca

EBCI - College Of Applied Arts & Technology (Moncton, New Brunswick)
Tel: (800) 561-9390 / (506) 855-8555 / Fax: (506) 852-3922
E-mail: andrew@ebci.ca Web: http://www.ebci.ca/

Emily Carr Institute of Art and Design (Vancouver, British Columbia)
Tel: (604) 844-3800 / Fax: 604-844-3801
E-mail: admissions@eciad.bc.ca

Fanshawe College (various Ontario locations)
Tel: (519) 452-4277
E-mail: registrar@fanshawec.on.ca

First Interactive Computer College (various Ontario cities)
Tel: (905) 737-8089 / Fax: (905) 737-2478
E-mail: info@ficc.ca

FrontMedia Ltd. (Vancouver, British Columbia)
Tel: (604) 871-9131
E-mail: woof@istar.ca

George Brown College (Toronto, Ontario)
Tel: (416) 415-2160
E-mail: info@gbrownc.on.ca

Georgian College (Barrie, Ontario)
Tel: (705) 728-1968
E-mail: registrar@gc1.georcoll.on.ca

Grant MacEwan Community College (Edmonton, Alberta)
Tel: (403) 497-5140
E-mail: gmccinfo@gmcc.ab.ca

HiTech Institute (Toronto, Ontario)
Tel: (416) 513-1535 / Fax: (416) 513-1536
E-mail: monicab@htinstitute.com

Holland College (Charlottetown, Prince Edward Island)
Tel: (800) 446-5265 / (902) 566-9603 / Fax: (902) 629-4239
E-mail; info@hollandc.pe.ca

Humber College of Applied Arts and Technology (Etobicoke, Ontario)
Tel: (416) 675-3111
E-mail: enquiry@admin.humberc.on.ca

ICARI (Montreal, Quebec)
Tel: (514) 982-0922 / Fax: (514) 982-0288
E-mail: info@icari.qc.ca

Inner Action Inc. (Kanata, Ontario)

Tel: (613) 599-3785 / Fax: (613) 592-2344
E-mail: action@inneract.net

Collège Inter-Dec (Montréal, Quebec)
Tel: (800) 363-3541 / (514) 939-4444 / Fax: (514) 939-3046

International Academy of Design (Toronto, Ontario)
Tel (800) 361-6664 / (416) 922-3666
E-mail: admissions@iaod.com

Lakehead University Summer Institute of Advanced Studies (Thunder Bay, Ontario)
Tel: (807) 343-8110 / Fax: (807) 343-8023
E-mail: liaison@sky.lakeheadu.ca

Lethbridge Community College (Lethbridge, Alberta)
Tel: (800) 572-0103 / (403) 320-3200
E-mail: fisaac@raptor.lethbridgec.ab.ca

McGill University (Montréal, Québec)
Tel : (514) 398-4751 / Fax : (514) 398-8343
E-mail : welcome@aro.lan.mcgill.ca

McKenzie College (Sydney, Nova Scotia)
Tel: (902) 835-8319 / Fax: (902) 835-1219

McMaster University (Hamilton, Ontario)
Tel: (905) 525-9140 Ext. 27532 / Fax: (905) 528-6733
E-mail: mmedia@mcmaster.ca

Media Classroom (Calgary, Alberta)
Tel: (403) 531-4026 / Fax: (403) 531-0944
E-mail: info@mediaclassroom.com

Mohawk College (Hamilton, Ontario)
Tel: (905) 575-1212 / Fax: (905) 575-2378
E-mail: littlew@operatns.mohawkc.on.ca

Multimedia Software Development Studio (Vancouver, British Columbia)
Tel: (604) 412-7618 / Fax: (604) 684-7297
E-mail: jparry@bcit.bc.ca

Centre NAD (Montréal, Québec)
Tel: (514) 288-3447 / Fax: (514) 288-5799
E-mail: info@nad.qc.ca

NBCC Woodstock - Fredericton (Fredericton, New Brunswick)
Tel: (506) 453-2404 / Fax: (506) 453-2430
E-mail: info@dc.smythe.nbcc.nb.ca

NBCC - Miramichi (Chatham, New Brunswick)
Tel: (506) 789-2404 / Fax: (506) 789-2430
E-mail: sac02@mailserv.nbnet.nb.ca

Niagara College (Welland, Ontario)
Tel: (905) 735-2211
E-mail: webmaster@niagarac.on.ca

New2Media Studio (King City, Ontario)
Tel: (905) 833-3994 / Fax: (905) 833-4499
E-mail: nmpt@new2mediastudio.com

Northern Alberta Institute of Technology Multimedia Technology Certificate Contact Information
Phone: (780) 408-4000 Fax: (780) 408-4030
E-Mail: mci@nait.ab.ca For more Detailed Information, go to their website at http://mmt.naitmci.com

Production School House (Windsor, Nova Scotia)
Tel: (902) 798-4655 / Fax: (902) 798-3214
E-mail: info@productionschoolhouse.com

Red River College (Winnipeg, Manitoba)
Tel: (800) 903-7077 / (204) 632-2344 / Fax: (204) 697-4738
E-mail: ecrone@rrcc.mb.ca

Robertson College (Winnipeg, Manitoba)
Tel: (800) 716-4301 / (204) 774-9444 / Fax: (204) 774-9345
E-mail: rcollege@escape.ca

Ryerson Polytechnic University (Toronto, Ontario)
Tel: (416) 979-5000 / Fax: (416) 979-5341
E-mail: inquire@acs.ryerson.ca

Seneca College (North York, Ontario)
Tel: (416) 491-5050
E-mail: calendar@registrar.senecac.on.ca

Sheridan College (Oakville, Ontario)
Tel: (905) 845-9430
E-mail: infosheridan@sheridanc.on.ca

Sir Wilfred Grenfell College (Corner Brook, Newfoundland)
Tel: (709) 637-6333 / Fax: (709) 637-6383
E-mail: nkennedy@beothuk.swgc.mun.ca

Southern Alberta Institute of Technology (Calgary, Alberta)
Tel: (403) 282-6184 / Fax: (403) 284-7112
E-mail: bruce.johnston@sait.ab.ca

Toronto Image Works (Toronto, Ontario)
Tel: (888) 867-2252 / (416) 703-1999 / Fax: (416) 703-7659
E-mail: tiw@torontoimageworks.com

TSB School of Animation (Oshawa, Ontario)
Tel: (905) 723-1163 / Fax: (905) 433-8962
E-mail: animation@tsbosh.cnd.com

University of Alberta E-mail newmedia@ualberta.ca
Telephone (780) 492-3034 (780) 492-3039 Fax (780) 492-1857
For more information go to http://www.extension.ualberta.ca/newmedia/

University of British Columbia (Vancouver, British Columbia)
Tel: (604) 822-0693 / Fax: (604) 822-9826
E-mail: multimedia@cce.ubc.ca

University of Calgary (Calgary, Alberta)
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E-mail: fdubreui@acs.ucalgary.ca

Université Concordia (Montréal, Québec)
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University of Lethbridge, School of Fine Arts (Lethbridge, Alberta)
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E-mail: skinner@uleth.ca

Université de Montréal (Montréal, Québec)
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E-mail : registrariat@regis.umontreal.ca

University of New Brunswick (Fredericton, New Brunswick)
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Université du Québec à Montréal (Montréal, Québec)
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E-mail : admission@uqam.ca

University of Toronto - School of Continuing Studies (Toronto, Ontario)
Tel: (416) 978-2400
E-mail: contstud_registrar@scs.utoronto.ca

Vancouver Film School (Vancouver, British Columbia)
Tel: (604) 685-6331 / Fax: (604) 685-6308
E-mail: registrar@vfs.com

VFS Multimedia (Vancouver, British Columbia)
Tel: (800) 661-4101 / (604) 685-6366
E-mail: query1@multimedia.edu

XtraNet U (Toronto, Ontario)
Tel: (877) 644-3444 / (416) 675-1881 / Fax: (416) 675-9217
E-mail: info@xnu.com

Canada

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Members of the Board

British Columbia
New Media BC (www.newmediabc.com)
(604) 739-9878
Jane Green
Freydis Welland
Tarnie Williams

Western Canada
Alberta
New Media (www.albertanewmedia.com)
Info@albertanewmedia.com
Christopher Macdonald

New Media West (www.min.mb.ca/west.html)
(204) 943-9222
Brian R. Wood

Saskatchewan
New Media Developers Association (www.snmda.sk.ca)
(306) 790-8427
Leif Storm

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IMAT (www.imat.ca)
(416) 926-9301

Aurel Langlois
William Stratas Leonard Glickman

Québec
APMQ (www.apmq.org)
(514) 848-7177
Paul Allard
Marc-Alexandre Boutet
Claude Dugas

Maritimes
Media Fusion (www.mfusion.com)
(902) 567-2998
Steven JP Comeau
Diane Hollett
Georges Butters

Canada

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ARCHIVES - Profile of the Canadian Multimedia Industry - Appendix

Note: This is not an exhaustive list. It is meant to be a sample of the many programs and funds available in Canada

PROGRAMS AND FUNDS AVAILABLE TO THE CANADIAN MULTIMEDIA INDUSTRY

Organization	Objectives	Type of assistance	Type of funding	Budget
	NATIONAL FUNDS			
Bell Canada www.bell.ca (514) 737-1337 (416) 977-8154 asheffer@iipf.ca	**Bell Broadcast and New Media Fund** This fund will be used to encourage content creators in Ontario and Quebec develop multimedia works for the information highway. Administered by the Independent Production Fund. Eligible projects must be broadcast productions which include a multimedia component.	Content	Grant	$3 million per year
Canadian Independent Film and Video Fund (613) 729-1900	**Canadian Independent Film and Video Fund** The CIFVF will provide financial assistance for the development of fully interactive multimedia projects which are educational or informational in content or edutainment in nature. A significant portion of the product's content must include live-action or animated video images.	Content : educational / informational	Grant	Assistance up to a maximum of 49% of the direct costs of a budget ; in the form of non-equity (i.e., a grant) financial participation. Maximum of $60,000.
Canadian Independent Film and Video Fund http://www.cifvf.ca/english/fundy-en.html (613) 729-1900	**THE FUNDY COMMUNICATIONS PRODUCTION FUND** The objectives of the Fundy Communications Production Fund are to encourage and increase the production of educational/informational content from the four Atlantic provinces for the broadcast and new media markets.	Content: educational / informational	Grant	$ 300 000
Business Development Bank http://www.bdc.ca/bdc/home/Default.asp (888) 463-6232 Lise Allaire (514) 283-5611	**Alliances with banks** Financing and/or growth management services made available to knowledge-based, innovative manufacturing and exporting businesses in different regions of Canada	Development Marketing	Financial products and other services	n.a.various projects
Business Development Bank Lise Allaire (514) 283-56111	**Term Loans** BDC offers flexible term loans for a variety of commercially viable projects, including expansion projects, plant overhauls, the purchase of existing businesses and the acquisition of	Development, growth	Financial products and other services	n.a.Various projects

	fixed assets. In some cases, the loan may be used to reconstitute working capital depleted by capital expenditures or to finance sales growth.			
	Innovation Loans The BDC has created the Innovation Loan to help innovative businesses position themselves to take advantage of new markets and new technologies available to today's global players. Uses: ▪ Research & Development of new products and services ▪ Buying or developing new technologies for product and process improvement ▪ Introducing quality management standards, such as ISO, HACCP and QS 9000 ▪ Planning and implementing a marketing plan or growth strategy ▪ Training and development of management and staff ▪ Financing of up to $100,000 to develop foreign markets	Development, growth	Financial products and other services	n.a.Various projects
	Young Entrepreneur Financing Program The Young Entrepreneur Financing Program is aimed at giving start-up entrepreneurs between the ages of 18 and 34 a solid foundation to build a new business and 50 hours of tailor-made business management support help to ensure that entrepreneurs with commercially-viable business proposals and excellent potential get their businesses off the ground.	Development	Financial products and other services	Term financing of up to $25,000
	Cultural Industries Development Fund The Cultural Industries Development Fund (CIDF) provides specialized and flexible financing for small businesses operating in book and periodical publishing, sound recording, film and multimedia production.	Development	Financial products and other services	Loans of up to $250,000 per 12 month period, and a total commitment of $1 million over time.
	Techno.net loan This flexible financing option allows entrepreneurs to cover the costs related to implementing a Web presence without delay and without straining current operations.	Development	Financial products and other services	Financing ranges from $25 000 to up to $500 000 to meet the various costs related to the implementation of a Web solution.

Industry Canada http://collections.ic.gc.ca/E/index.php (800) 465-7766	**Canada's Digital Collections (CDC)** Canada's Digital Collections (CDC) program, an element of the federal government's Youth Employment Strategy (YES), pays young people to create websites featuring significant Canadian material in the public domain. Collections program awards contracts to Canadian firms, associations, institutions, museums, libraries, archives, educational institutions and other organizations to hire teams of people 15 to 30 years of age to digitize text, images, audio and video material and incorporate it in attractive websites for display on the World Wide Web through the Canada's Digital Collections server.	Training	Contract	n.a.
Industry Canada http://strategis.ic.gc.ca/SSG/tp00167e.html (800) 266-7531	**Technology Partnerships Canada (TPC)** Funds the development, production and marketing of high-quality, original, interactive Canadian multimedia works intended for the general public. TPC advances and supports government initiatives by investing strategically in research, development and innovation in order to encourage private sector investment. TPC also encourages the development of small and medium-sized enterprises (SMEs) in all regions of Canada.	Assistance will be in the form of repayable contributions	Loan; sharing ratio of not more than 33 percent	n.a.
Industry Canada http://cap.ic.gc.ca/english/hub.htm (800) 575-9200	**Community Access Program/ VolNet** CAP grants funding to bring new technologies and information services to classrooms and rural communities across Canada. VolNet aims at connecting the voluntary sector and not-for-profit organisations.	TrainingInfrastructure	Grant	n.a.
Industry Canada http://www.schoolnet.ca/funds/eng/home.html (613) 954-5454	**Learnware** The SchoolNet Multimedia Learnware and Public Access Applications Program is an initiative of Industry Canada's SchoolNet helping to strengthen Canada's new media learning and Internet applications industries while also improving access to learning opportunities for Canadians. The program matches the investments of partners for the production of commercial learnware and public access applications for Canada's Information Highway.	Training Infrastructure Product Development	Grant	n.a.
Industry Canada http://francommunautes.ic.gc.ca 800-268-6608	**Francommunautés virtuelles** The program is designed to help Canada's Francophone and Acadian communities take full advantage of information and communications technologies. The objectives of the program are to increase content, applications and services in French on the Internet and to promote networking among Francophone and Acadian communities throughout Canada.			$1 million per year until 2000-01
Telefilm Canada http://www.telefilm.gc.ca/choix_flash.asp (416) 973-6436 (514) 283-6363 (604) 666-1566 (902) 426-8425	**Multimedia Fund** Funds the development, production and marketing of high-quality, original, interactive Canadian multimedia works intended for the general public.	Content Development and Production	Advance: developmentLoan: production	$30M over 5 years

Canada Council of the Arts http://www.canadacouncil.ca Marilyn Burgess marilyn.burgess@canadacouncil.ca 416-566-4414 x4521	**Various programs provide grants to artists for use of new media** These programs provide assistance to Canadian artists and organisations, for types of works, including new media art works.	Content	Grant	$600,000
WEST REGION				
Business Development Bank (888) 463-6232	**Western Technology Seed Investment Fund** Finances businesses in the pre-start-up phase. The Western Technology Seed Investment Fund, co-managed by BDC Venture Capital Group, Ventures West and Cascadia Pacific Management covers western Canada. The Western Technology Seed Investment Fund is a fully invested venture capital fund created to provide financing and management support for early-stage technology projects in Western Canada.	Development	Financial products and other services	n.a.
Western Economic Diversification Canada (WD) http://www.wd.gc.ca/finance/default_e.asp (888) 338-WEST (9378)	**Knowledge Based Industry Support Program** WD is creating new and alternative sources of capital for small and medium-sized businesses by working closely with financial institutions to create a specialised series of loan programs. WD and Business Development Bank have established a loan program for companies that rely heavily on research and development to acquire new technologies to create products or processes. This unique loan program is designed to meet the special needs of smaller knowledge-based companies and provides capital for projects not normally financed by traditional financial institutions.	Development	Loans and other services	Loans range from a minimum of $50,000 to a maximum of $250,000 per project and $500,000 per borrower
TELUS http://www.telus.com/telusfund/index.html British Columbia: Donna.Serviss@telus.com Alberta: Christi.Mate@telus.com	BC New Media and Broadcast Fund To stimulate the production of innovative in both traditional broadcasting and the emerging world of new media. We also want to foster a strong British Columbia presence in Canada's new media and broadcasting industries. Finances mainly production of creative new media projects that have excellent market potential and are intended for distribution to and use by the general public.	Content, development and Commercialisation	Combination of loans, investments and grants. Financial participation will be in the range of 10% to 45% of a project's cost to a maximum of 200,000.	$10 million over about five years
BC Advanced Systems Institute http://www.asi.bc.ca (800)501-3388 Gordon Bird (604) 689-4198 gbird@asi.bc.ca	**Advanced Technology Innovation Fund** The fund, sponsored by Industry Canada but delivered by the BC Advanced Systems Institute, provides financial support to small, BC-based companies in the multimedia, computer telephony and health informatics sectors for technology development leading to commercialisation of products/services.	Development	Grant	75 percent of eligible project costs to a maximum of $100 000 for technology development. Funding is provided on a repayable

				basis through royalties based on sales.
Beacon Group of Companies (604) 684-6440	**Production services financing** Production services financing and tax credits.	Financial services	Tax credit	n.a.
Ministry of Small Business, Tourism and Culture (250)356-1718	**Professional projects in media arts** Scholarships are awarded depending on the project's significance in assisting the development of professional organisations dedicated to media arts in British Columbia. Projects should advance the applicant's organisational, enhance the level of professional services available to the community or facilitate development in new areas of interest.	Development	Grant	$10,000 was awarded in total in 1998-99. Awards will not exceed 50 percent of project costs
Ministry of Small Business, Tourism and Culture (250) 356-1718	**Project Assistance for Visual Artists** Reserved for certain creative projects of British Colombia visual arts professionals. Multimedia artists are also eligible	Content	Grant	$232,634 was awarded to all categories in 97/98
Department of Education http://www.learning.gov.ab.ca(403) 674-5350	**Advanced Learning Technology Alliance** The Department works in partnership with firms and school boards to develop and produce multimedia programs for Alberta schools.	Educational Content Training	Fund	$2 million per year
SaskTel (306)798-3456 Valerie Creighton bell.caskfilm@access.com.ca	**SaskTel New Media Fund** Provides equity investment to Saskatchewan multimedia productions.	Content, R&D Training	Grant	n.a.
Saskatchewan Film and Video Development Corporation (Saskfilm) (306) 787-5959	Development loans to increase the resources made available to producers to complete their projects. Saskfilm limits its total investment in a project to $15,000 for multimedia products	Content	Development loans	n.a.
ONTARIO				
Ministry of Economic Development and Trade http://www.ontario-canada.com YEP@edt.gov.on.ca	**Young Entrepreneurs Program** Developed in partnership with the Royal Bank, this program offers pre-start-up funding and support for young entrepreneurs.	Maximum loan up to $7,500. Loan amortised over 5 years		n.a.
Ministry of Energy, Science and Technology Brigitte Danzig 416-326-9628 danzigbr@est.gov.on.ca	**Interactive Digital Media Small Business Growth Fund (the IDM Growth Fund)** To invest in strategic initiatives and activities that will spur the growth of, and increase the number of jobs in, small IDM firms and the overall IDM industry in Ontario. Projects proposed for funding must have commitments of resources from business partners, the support and involvement of small IDM firms and must demonstrate they can deliver real industry-wide benefits.	Development, commercialisation	Investment	Five-year, $10 million initiative
Ministry of Energy, Science and Technology (Information and Communications Technologies Branch)	**Telecommunications Access Partnership (TAP)** TAP aims at helping sectors, communities and entrepreneurs use the information highway to become more efficient and competitive.	Infrastructure	Grant	$3 million for the 4th round of proposal, ending June

(416) 326-9643				1998. Winding down through fiscal years 2000/01 and 2001/02
Department of Finance http://www.gov.on.ca/fin (416) 325-0333	**Tax credit for the production of digital, interactive multimedia products** The Ontario government announced in its recent budget the creation of this tax credit, which will be a 20% refundable credit applicable to expenses made in Ontario.	Digital, interactive content	Tax Credit	1998-99, expected cost of $5 million
	SME Development Fund Available to SME in the digital, interactive multimedia content production. (Also announced in the Budget, more detail later)	Content development	Grant	$10 million over 5 years
	Training Program A new program, to be run by the Canadian Film Centre, will be implemented to offer training in the new media sector.	Training	Grant	$500,000
Ontario Film Development Corporation (OFDC) http://www.ofdc.on.ca Sherry Hills 416-642-6652	**Ontario Computer Animation and Special Effects (OCASE) Tax Credit** The OCASE Tax Credit is a refundable tax credit based on Ontario labour expenditures incurred by a corporation in computer animation and special effects activities. The tax credit is calculated as 20% of eligible expenses. Labour expenses for individuals working in Ontario, who are not employees of the corporation, may be eligible for a 50% tax credit.	Animation and Special Effects Content	Tax Credit	$ 100 000
Ontario Film Development Corporation (OFDC) http://www.ofdc.on.ca Quan Lawson qlawson@ofdc.on.ca (416) 314-6858	**Ontario Interactive Digital Media Tax Credit (OIDMTC)** The OIDMTC is a refundable tax credit based on labour expenditures incurred to create interactive digital media products in Ontario. Operational since December 1999.	Digital Content	20% Tax Credit	n.a.
Ontario Film Development Corporation (OFDC) http://www.ofdc.on.ca Sherry Hills 416-642-6652	**E3 MARKET MENTORSHIP, LOS ANGELES** In its sixth year, E3, the Electronic Entertainment Expo, the largest show of its kind in the world offers a unique opportunity for new media producers to assess the viability of their products in development. Successful applicants will receive: ▪ a $1,000 grant to assist with travel and accommodation costs to attend E3 in Los Angeles, CA ▪ Registration for E3 ▪ Mentor and research opportunities through SDMI's selected new media consultant, Jeff Cabral, previous	Market Intelligence	Grant - Service	n.a.

	attendee at E3, including one-on-ones with appropriate industry professionals matched to your project focus ■ Orientation and on-site support by Jeff Cabral			
QUEBEC				
The Economic Development Agency of Canada for the Regions of Quebec (514) 283-2500	**IDEA-SME Fund** This co-operative program between CED and the BDC is intended to address the financing needs of knowledge-based firms, and targets small and medium-sized businesses. Main services provided include strategic watch, consultations, conferences and seminars. Specifically, The program's priorities are to sensitise SMEs to the need to make R&D and Design (RDD) part of their day-to-day operations; to stimulate marketing of products resulting from RDD; and to disseminate test results that could prove useful to SMEs in the same sector. **Financial assistance** ■ Maximum: 50% of eligible costs; ■ assistance to commercial enterprises is repayable; ■ assistance to an NPO for non-commercial activities is non-repayable.	Services Development R&D Commercialization	LoanProfessional services	$165 M under the IDEA-SME Program over the next 3 years
	Loan program for technology firms Canada Economic Development and the National Bank of Canada (NBC) have concluded a partnership agreement for the establishment of a loan program which will target mainly SMEs in the information technology, bio-science and health, and advanced materials sectors, at the start-up or growth stage to carry out an eligible project.	Development Commercialization	loans from $100,000 to $500,000 per project with terms up to seven years.	n.a.
	SME Techno Access SME Techno Access is a joint financing program set up by Canada Economic Development and the Mouvement des caisses Desjardins to meet the needs of emerging industries and innovative manufacturing SMEs.	Development R&D Commercialization	$25,000 and $500,000 per project, with a ceiling of $1 million per firm	
Technocap http://www.technocap.com	**Technocap** Technocap is a private risk capital firm that invests in technology and Internet firms in the start-up or expansion phase.	Infrastructure	Risk capital	$100 million
Société Innovatech du Grand Montreal http://www.innovatech.qc.ca/en/index.html (514) 864-2929	**Innovatech Grand Montreal** Increase the capacity for innovation of firms and contribute to competitiveness and economic growth in Quebec. Active in various areas, such as health sciences and information technologies.	Content Infrastructure	Risk capital	Up to $300 million from the Government of Quebec
Fonds de solidarité FTQ, Vidéotron, Banque Nationale	**Infosoft** Targets risk capital investments of several hundred thousand	Businesses	Risk capital Professional	n.a.

http://www.fondsftq.com	dollars, often with other investors, in SMEs involved in multimedia production and the Internet.		services	
Business Development Bank http://www.bdc.ca (888)463-6232	**T2C2, a seed fund for technology in Quebec** Developed in collaboration with SOFINOV, T2C2 is a venture capital fund created to provide funding and management support for early-stage technology projects in Quebec.	R&D Infrastructure	Risk capital Professional services	n.a.
CESAM http://www.cesam.fr/ (514) 848-7177 Susan.Harvey@cesam.gc.ca	**Multimedia Experimentation Fund** This program, ran by CESAM Multimedia Consortium, offers pre-start-up funding and support for entrepreneurs with multimedia projects in Quebec	Content	Grant Access to CESAM equipment and expertise	$1.5M over 3 years
Treasury Board http://www.autoroute.gouv.qc.ca autoroute@sct.gouv.qc.ca Michel Rosciszewski 418-528-2640 Fax 418-528-0339 michel.rosciszewski@sct.gouv.qc.ca	**Information Highway Fund** Primarily for projects contributing to the creation of content and services that will enable the people of Quebec to work, find entertainment, be educated, use routine services and have access to cultural products from Quebec sources in French.	Content	Loan guarantee Grant	$60 million over 3 years, max. $500,000 per project
Department of Culture and Communications	**Programme d'aide au développement des communications** PADEC intended to support innovative projects in telecommunications, information technologies and media, with particular attention devoted to multimedia development, language industries and the expansion of French content.	Content	Grant	Minimum contribution of $10,000 per project
	Politique de l'autoroute de l'information The priorities outlined include training, access, and content development.	Content Infrastructure Training	Various	More than $12 million over 2 years
	Forum des inforoutes et du multimédia Promotion of digital content and interactive applications, and development of those industries	Content	Grant	$300,000
	Fund for culture and communications To support the development and growth of firms in the culture and communications sectors.	Business growth	Risk capital	$15 million
Department of Finance http://www.cdti.gouv.qc.ca/en/accueil.htm (514) 864-6818Luc Jacob 514-873-7298 luc.jacob@envest-quebec.com Isabelle Giasson 514-283-2483 giasson@citemultimedia.com	**Bureau de développement de la nouvelle économie (BDNE)** To provide companies in the new economy with fast, simple access to the programs and tax benefits available to them, the Québec government has set up the Bureau de développement de la nouvelle économie (BDNE), a one-stop centre reporting directly to the ministère des Finances. By administering all the tax measures for companies in the new economy, the BDNE offers companies an improved overview of available programs and enables them to make a choice that reflects their individual situation. Programs are : ▪ CDTI : income tax credit, for capital costs	Content Infrastructure	5-year tax holiday;tax credit	n.a.

	■ Cité du Multimédia : tax credit for wages			
Department of Revenue (800) 450-4155	**R&D Tax credit and tax deduction** This program is intended to encourage experimental scientific research and development.	R&D	Tax credit	n.a.
Kathleen Carrière Directrice Direction du développement des entreprises et des affaires 514-499-6543	**An SMB tax credit for e-commerce** In order to promote the incorporation of e-commerce into SMBs, the government has created a tax credit designed to encourage Québec SMBs to adopt the technological tools required to enable their customers and suppliers to do business with them more efficiently. The tax credit is therefore a temporary one, lasting two years, intended to encourage the businesses concerned to invest rapidly in the incorporation of e-commerce solutions into their business.	Infrastructure	Refundable tax credit of 40% Maximum assistance is set at $40 000 per corporation.	n.a.
	Accelerated depreciation rate of 125% The granting of an accelerated depreciation rate of 125% for investments in the fibre-optic network in the regions is a developmental fiscal measure, designed to ensure the development of e-commerce activities in all Québec regions.	Infrastructure	Accelerated depreciation rate	n.a.
Société de développement des entreprises culturelles (SODEC) www.sodec.gouv.qc.ca/societe/f_bape_en.htm (514) 841-2200	**Refundable tax credit for the production of multimedia titles** Intended to encourage the production of Quebec multimedia titles	Content production	Tax credit	n.a.
	Funding of firms To support the development of all of a firm's activities, realize all its potential for expansion and to strengthen Quebec's control in various areas	Financing of firms	LoanLoam guarantee	n.a.
	Programme d'aide à l'exportation et au rayonnement culturel To contribute to the expansion of the markets of cultural firms outside Quebec; to increase their competitiveness and, strengthen their financial situation.	Exports	Grant	n.a.
	Programme d'aide à la production de titres multimédia To support the development and production of French-language multimedia content of a cultural, entertainment or educational nature intended for the general public;	Content production	Advance Professional services	Presently under reevaluation
Investissement Québec http://www.invest-quebec.com/en/accueil.htm (800) 461-2433Robert Davidson 514-873-1466 robert.davidson@invest-quebec.com	**Financial products** Formerly the Société de développement industriel du Québec (SDI), Investissement Québec offers financial assistance through the following programs : ■ SMB Guarantee: ■ Co-op Guarantee ■ NPO Guarantee, Social Economy ■ Private Investment and Job Creation Promotion Fund ■ Fiscal Measures for Investment	Development Commercialization Financing	Loan guaranteeInterest buy-down, assumption of interest charges, sharing of up to 50% of expenses related to feasibility studies	Fiscal aid granted varying from 35 to 50 % of eligible expenses

Conseil des Arts et Lettres du Québec http://www.calq.gouv.qc.ca/index.htm Yvon Bergeron (800) 608-3350	**Various programs provide grants to artists for use of new media** The principal mandate of the Conseil is to support creation, experimentation and production in all the regions of Québec, in the fields of the visual arts, arts and crafts, literature, theatre, music, dance, multidisciplinary arts, media arts and architectural research and to foster their diffusion in Québec, in Canada and abroad. It is also mandated to support the development of professional artists.	Content	Grant	$ 260 000
ATLANTIC REGION				
Business Development Bank http://www.bdc.ca (888) 463-6232	**Eastern Technology Seed Investment Fund** Finances businesses in the pre-start-up phase. The Eastern Technology Seed Investment Fund, co-managed by BDC Venture Capital Group, Ventures West Management Inc. and the Bank of Montreal Capital Corporation, is available for companies in Ontario and the Atlantic provinces.	Development	Financial products and other services	n.a.
NB Tel http://www.nbtel.nb.ca/English	NB TEL directly funds a wide range of projects related to new media and works in co-operation with other agencies to provide significant benefits to the cultural, broadcasting and new media sectors.	Content Development R&D Training and education.	Grant	n.a.
Department of Economic Development http://www.gnb.ca/ted-fde/indexe.htm(902) 643-6968	**Entrepreneur Program** The Entrepreneur Program is designed to help young entrepreneurs at start-up phase.	Start-up	loan guarantee and/or self-employment benefits	n.a.
Department of Education http://www.cnbb.nb.ca/english2/index.htm (506) 444-4283	**Connect NB Branché** A partnership between the Department of Education and NB Tel, who came together to offer community access to New Brunswickers. Various initiatives in place, from New Brunswick's Innovation Network to IT Jobnet.	Infrastructure Training		n.a.
MT&T (902) 421-6000	**Culture and New Media Innovation Fund** Designed to support projects in the cultural and educational communities that using new media. The funding is distributed to specific Nova Scotia organisations who in turn will consider individual firms' proposals.	Content	Grant	$1,9 million (except $480,000 to TARA)
Heather Jupp 902-421-6000 hjupp@tara.ca	**TARA Venture Capital Fund** Finance projects that bring new media solutions to Nova Scotia schools, government and businesses.	Infrastructure	Investment	$ 200K -$ 300K
Nova Scotia Film Development Corporation http://www.film.ns.ca/film/guidelines.html (902)424-7177	**New Media Production Fund** Provides financial assistance to those involved in the new media industry (interactive TV or CD-ROMs projects).	Content	Loan or investment	$270 000
NewTel and the Newfoundland and Labrador Arts Council http://www.nlac.nf.ca (709)726-2212	**NewTel/Arts Council Cultural Innovation Fund** Invests in the cultural community and the field of the arts in Newfoundland and Labrador. The fund will be administered by the Newfoundland and Labrador Arts Council and will	Content Infrastructure	Grant	$1.2 million

	support new media content and technologies.			
Department of Industry, Trade and Technology of Newfoundland and Labrador http://www.success.nfld.net (709)726-2212	**Economic Diversification and Growth Enterprises program (EDGE)** Invests in the cultural community and the field of the arts in Newfoundland and Labrador. The fund will be administered by the Newfoundland and Labrador Arts Council and will support new media content and technologies.	Development	Tax holiday	n.a.
Department of Development and Rural Renewal http://www.gov.nf.ca/drr (709) 729-7000	**Strategic Enterprise Development Fund** ▪ Designed to help small and medium sized firms engaged in strategic growth industries, particularly those offering potential for export, by providing access to essential business financing ▪ Some of these industries are aquaculture, environmental industries, dimension stone, high-tech knowledge-based industries, and small-scale value-added manufacturing ▪ Can help where financial needs cannot be met by conventional lenders and other sources of business finance.	Development Commercialization		n.a.
Newfoundland and Labrador Arts Council http://www.nlac.nf.ca http://www.newtel.com (709) 726-2212 rwinsor@newcomm.net	**Scholarship program** Reserved for artists and non-profit organizations in Newfoundland and Labrador. Multimedia projects are eligible.	Content Infrastructure	Scholarship	n.a.
Island Tel http://www.islandtel.pe.ca	**Island Tel Innovation Fund** It funds the development of Canadian content for broadcast or use in new media, research and development projects and education and training, particularly in the area of interactive multimedia in PEI	Content R&D Infrastructure	Investment	n.a.
Prince Edward Island business development http://www.peibusinessdevelopment.com	**Entrepreneur Loan Program** THE PROGRAM PROVIDES ENTREPRENEURS with up to $25,000 for use as investment in eligible new and expanding businesses. Loans are sourced through participating financial institutions and are fully guaranteed by Prince Edward Island Business Development to a maximum of five years.	Development	Loan	Up to $25,000
	Equity Investors' Incentive Program A NON-REPAYABLE CASH GRANT is available to investors to encourage investment in eligible PEI-based businesses. The cash grant is calculated at 20 to 25 percent of the purchase price of the equity investment made in the small business.	Financing	Grant	n.a.
	Film and Digital Media : financial incentives program To foster an infrastructure and environment which encourage the development, production, marketing and distribution of Prince Edward Island film product in the regional, national and international marketplaces,	Infrastructure Development Production Marketing and distribution	Loans, credits and investment	n.a.

PEI Department of Education http://www.gov.pe.ca/index.php3 (902) 368-4000	**Cultural Development Program, Product Development** Reserved for residents and organizations of PEI. Priority given to applicants who have confirmed knowledge and experience in the sectors of culture and heritage.	Content	Grant	Up to $5,000

Canada

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Industry Canada Industrie Canada

ARCHIVES - Profile of the Canadian Multimedia Industry - Conclusion

This study, which is the product of the combination of information gathered from various sources, has attempted to draw as true a profile as possible of the Canadian multimedia industry and of the implications for Canada of the development of the multimedia phenomenon worldwide. Several studies and surveys are still needed in order to draw up an exhaustive profile of this emerging industrial sector. Provincial industries, for instance, will have to be analyzed in greater depth in order to better identify their strengths and weaknesses and thus enable decision-makers to make sound investment decisions in an environment that is as changing as multimedia. Decision-makers should also conduct surveys and studies of the industry's segments since they behave in different ways and therefore require different approaches by decision-makers. It will also be necessary to adopt a single and detailed definition of a multimedia product and a multimedia producer. Because of the absence of a precise classification of the industry, its entrepreneurs often have difficulty securing adequate funding.

The Canadian industry will continue to provide a field for acquisitions, mergers and strategic alliances among companies operating in this sector. The distribution and marketing of Canadian multimedia products will remain an important issue over the next few years. Access to foreign markets will remain a key factor in the business strategies of Canadian multimedia companies. The convergence between the Internet and television also promises some very interesting opportunities for Canadian multimedia content producers.

The popularization of multimedia, which will be made possible by much more widespread high-speed Internet access and a steady decline in the cost of computer equipment needed to use multimedia, will open up a new era in which the multimedia production industry will have a key role to play. The effects of current and potential multimedia applications will be keenly felt in many aspects of our lives. From telemedicine to entertainment, through training, the multimedia industry will be called upon to play an ever-increasing role in Canada's economic life. This is why it is more important than ever for Canadians to take note of this reality and for decision-makers to provide the necessary energy and investments for the development of a strong, diversified and dynamic national industry.

Canada

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